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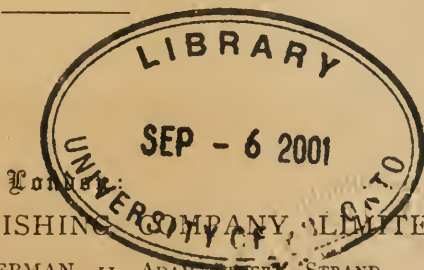
RELATING TO

THE THROAT, NOSE, AND EAR.

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# THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

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*Founded in 1887 by* **MORELL MACKENZIE** *and* **NORRIS WOLFENDEN**

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# THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

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## A FOREIGN BODY REMOVED FROM THE LARYNX WITH THE AID OF THE AUTOSCOPE.

By MAX THORNER, A.M., M.D. (Cincinnati, O.),

Professor of Clinical Laryngology and Otology, Cincinnati College of Medicine  
and Surgery; Laryngologist and Aurist, Cincinnati Hospital, etc.

THE direct inspection of the air passages without mirror, called "autoscopy" by the inventor, Dr. A. Kirstein, is, for diagnostic purposes alone, an extremely valuable addition to our resources. But, as Kirstein has pointed out in his exhaustive monograph<sup>1</sup> on this method, it may prove of still greater value for operative procedure within the larynx. It is only necessary to adapt our ordinary laryngological armamentarium for this purpose to meet autoscopic requirements,<sup>2</sup> *i.e.*, to change the curved instruments into straight ones, and we can proceed without further alterations in the shape or size of our instruments. Some cases, of course, will not be suited for any autoscopic manipulations, as has been fully set forth by the author himself.

Mr. C. F. B., aged twenty-four, a civil engineer, consulted me on March 25th, 1896. While eating stewed chicken two days before he suddenly felt something "go the wrong way," as he expressed it. He had subsequently a violent coughing and choking spell, which after a while subsided, to be repeated again during the night. A physician who was called gave him an emetic, after which the patient became more comfortable. Since that time he had had occasional coughing spells, although on the whole he got along very well. However, he was sure, he stated, that a foreign body—probably a bone—was somewhere lodged in his throat, although there was no difficulty in swallowing, nor any pain worth mentioning.

<sup>1</sup> Kirstein: "Autoscopy of the Larynx and of the Trachea." Philadelphia: The F. A. Davis Company.

<sup>2</sup> Op. cit.

The patient was a strong young man, of more than average size. No signs of distress were noticeable. There was no dyspnoea, nor any tenderness of the neck on pressure. The voice was slightly husky. Laryngoscopic examination revealed, in an extremely large larynx, situated longitudinally, a piece of bone, the broader end of which seemed to be imbedded in the right ventricle, while the other end leaned against the left ary-epiglottic ligament. The upper end seemed not to be impacted. It was evident that this patient's larynx was not very irritable. The autoscope was introduced with the medium-sized hood attached. No cocaine was deemed necessary. It was possible to readily grasp the foreign body with a slender serrated forceps in Krause's straight tube and universal handle, and to lift it out of the larynx and remove it together with the autoscope. The removed piece of bone was one of the small ribs of a chicken, and was nearly one and a half inches long. The whole operation took but a few seconds.

## RETROSPECT OF THE YEAR 1896.

### DIPHTHERIA.

BY J. MACINTYRE, M.B., F.R.S.

The etiology, pathology, and treatment of this affection still occupy the attention of the profession. The literature, as usual, is abundant, and comes from all parts of the world. It is quite impossible to give the least idea of the number of papers written upon this subject during the year, but, taken collectively, it is only fair to say that our knowledge of many of the questions associated with this terrible affection has been largely increased. Some of the papers deal with isolated cases, or only a few, and cannot be of great value when taken individually. Others have been studied altogether from the clinical standpoint, and it need hardly be pointed out that statistics have again been brought in by different writers to support totally opposing views. When one considers the many difficulties in arriving at a just conclusion one cannot wonder that controversies are still going on as to the exact value of the serum treatment. It is fair, however, to say that with another year's trial it has received great support from the medical profession, and its advocates include many reliable observers and authorities.

Kanhack and Stephens deal with the question of the escape of the diphtheritic bacillus into the blood and organs ("Path. Soc., London," Jan. 7, 1896, p. 181) by continuity and contiguity of tissue to passage along the lymphatics, and to distribution by the blood stream. Hewlett and Nolan ("Brit. Med. Journ.," Feb. 1, 1896, p. 205) give the result of 1000 cases examined at the British Institute of Medicine. In 587 the bacillus was found, in four the result was doubtful; in 353 the bacilli were present in pure culture. In one case, proved by inoculation, virulence was proved twenty-three weeks after convalescence.

Wolfenden ("Brit. Journ. Laryng.," July, 1896, p. 1) draws attention to the question of the spread of disease in schools. Smith, of the London School Board, concludes, after inquiry into 2168 cases, that school plays an unimportant part in the enormous increase of this affection. Shirley Murphy combats this view, and holds that during the school season there is an increase. Lennox Browne (p. 309) has collected a valuable review of the records of others. It need scarcely be pointed out that in such an important question as the serum treatment both sides of the question deserve careful attention. He has collected names of authors "who are adverse, or who deprecate 'hè extravagant enthusiasm of others." He quotes the dangers recorded as complications:—Baginsky, cardiac failure; Soerensen, hæmorrhagic nephritis; Oertel, Hansemann, Benda, Siegert, albuminuria. Klebs, Fraser, Kortright, and Kassowitz's names are cited as raising doubt as to the immunizing power.

The question of how far the results may be influenced by combining serum treatment with other constitutional local aids also receives attention, while the statistics of the Metropolitan Asylums Board are critically examined. The "Lancet" Commission has during the year gone extensively into a most important point, viz., on the relative strengths of diphtheria antitoxic serum.

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## MOUTH AND PHARYNX.

BY A. SANDFORD, M.D.

With the ever increasing number of *special* societies and of reports from other sources the difficulties of attempting anything approaching an exhaustive synopsis of the work brought forward during the year have proportionately increased. Moreover, the space required for a comprehensive retrospect would far exceed that available for such a purpose. It will, therefore, not be possible to attempt more than a brief reference to the more interesting points embraced in the year's work, with the mere mention of the communications upon various subjects which have appeared or received notice in this JOURNAL during the past year.

Nothing of a sensational character, or even approaching to first-class importance, has been achieved in connection with affections of the mouth and pharynx; but a considerable amount of steady work has been recorded, proving the existence of a constant spirit of scientific investigation, which has, with concentrated attention, been actively engaged on every possible source of fresh information.

The importance of thorough *antiseptics* of the mouth and pharynx has been dwelt upon by various authorities in relation to the protection and treatment of adjacent organs, thus guarding the main portal against the admission of hostile germs. For this purpose, among the various well-known agents, a solution of fluoride of sodium (up to 1 per cent.) has been recommended as a wash. Pedley has treated of the reflexes arising from neglected children's teeth. Kobner uses belladonna in full doses in cases

of leucoplakia, mercurial stomatitis, etc. Lennox Browne has suggested that the time-honoured "gargle" should be abolished as a means of local therapeutics in favour of sprays, lozenges, etc.; and Guye, of Amsterdam, Grant, and others have given a qualified support to this suggestion.

The *lingual tonsil* has received considerable attention; and its pathological importance, both direct and indirect, has been dwelt upon forcibly by various authorities. Amongst them, Escat ("Rev. de Laryng.") indicates the diagnostic points of phlegmonous lingual amygdalitis. Swain ("Trans. Amer. Lar. Assoc.") calls attention to the non-recognition hitherto of symptoms arising from acute disease of the lingual tonsil. Clark ("Philadel. Polyclinic") reports seven cases of hypertrophy of the lingual tonsil, and discusses at length the history, physiology, etiology, and treatment of this affection. Beausoleil ("Rev. de Laryng.") describes fully the symptoms, attendant phenomena, and treatment of acute disease of the lingual tonsil. Lennox Browne ("Liv. Med. Chir. Journ.") enters minutely into the subject of chronic hypertrophy of the lingual tonsil in connection with lingual varix, giving elaborate statistics; and the same author ("Med. Mag.") discusses Wingrave's views on the anatomy of the tongue, and describes inflammatory affections of the lingual tonsil. Downie ("Glas. Med. Journ.") refers to pathological changes in the lingual tonsil as a factor in causing aprosexia and as a channel for introduction of germs into the lymph channels. Bronner (Lar. Soc. Lond.) showed a case of myxoma of the lingual tonsil. Ray ("Med. News") attributes various troubles to "hypertrophy of lymphoid tissue at base of tongue in singers." Hulen ("N. Y. Med. Journ.") reports a case of cavernous angioma of the tongue. Akerblom ("Monats. für Ohrenheilk.") records a case of acute inflammation of the ductus rivina and sublingual gland. Lupus of the tongue and pharynx has been treated by Law, Stabb, Spire, and others. Onodi (Pesth) has reported cases of fibro-sarcoma of the tongue and lipoma of the tonsil ("Monats. für Ohrenheilk."). Carcinoma and other tumours of the tongue have been considered by Herzfeld (Berlin Lar. Soc.), Anderson ("Quart. Med. Journ."), etc., etc. Helbnig ("Jahrb. für Kinderheilk.") describes a case of muscular macroglossia. Evans ("Med. News") reports four cases of chancre of tongue and tonsil. Arslan, of Padua ("Bollet. delle Mal. dell' Orecchi," etc.), makes an exhaustive analysis of the whole subject of tumours of the tonsil up to date. Rosenberg ("Rev. de Laryng.") discusses the subject of tuberculosis of the tonsil, his cases being about one in one thousand at his polyclinic. Sir Willoughby Wade ("Brit. Med. Journ.") calls attention to tonsillitis as a factor in rheumatic fever. Newman (Laryng. Soc., Lond.) describes cases of carcinoma and epithelioma of tonsil. A case of alarming hæmorrhage after tonsillotomy, recorded by Piergelli ("Arch. Ital. di Otol., Rinol., Laring."), necessitated ligature of right common carotid. Burgess (Royal Acad. Med., Ireland) reports a case of severe hæmorrhage from ulceration in acute tonsillitis. Kendal ("Journ. Amer. Med. Assoc.") suggests reduction of enlarged tonsils, by means of fuming hydrochloric acid applied on a glass point. Purvis ("Brit. Med. Journ.") describes the microscopic appearances of a tuberculous tonsil.

Furet (Soc. Franç. d'Otol. et de Laryng.) discusses reflex tonsillar

cough. Broeckhaert (Belg. Soc. of Otol. and Laryng.) enters at considerable length into the subject of acute lacunar tonsillitis. Straight ("N. Y. Med. Journ.") reports two cases of unresolved amygdalitis; and Lacoarret ("Rev. de Laryng.") a case of post-diphtheritic pseudo-hypertrophy of the tonsils. Cases of congenital perforation of the fauces have been reported by Lapalle and Huysman; whilst a case of apertures in both anterior pillars of the fauces has been recorded by Fullerton ("Brit. Med. Journ."). Several cases of Ludwig's angina, varying in the prominent group of symptoms peculiar to each, have been treated of by Ripault, Taylor, Ficano, Froquart, and Vergely. Semon (Laryng. Soc., Lond.) records a case of chronic retropharyngeal abscess in the adult; and Kolpiak ("N. Y. Med. Journ."), in a paper on acute retropharyngeal abscess in childhood, brings forward the experience gathered from seventy-six cases seen in six years, and discusses their classification and treatment. Stewart (Laryng. Soc., Lond.) records a case of œsophageal malignant disease in a girl of twenty-three years of age, and Butlin mentions a well-marked case in a girl of twenty-four. Brewer (N. Y. Acad. of Med.) records a fatal case of pharyngeal hæmorrhage. Myles (N. Y. Acad. of Med.) describes a case of central cleft of the soft palate in an adult successfully operated upon. Boltz (Hamburg) records a case of round-celled sarcoma of soft palate cured by extirpation.

Jamieson ("Brit. Med. Journ.") produced a paper on superficial affections of the lips. Ravogli ("Journ. Amer. Med. Assoc.") discusses the subject of syphilid of the pharynx. Stewart ("Brit. Med. Journ.") records a case of tuberculosis of the tonsil. Tubercle of the pharynx has been treated of by Clifford, Beale, Chappel, Levy, and others. Vallas ("Gaz. des Hôpitaux") discusses pharyngotomous, transhyoidea, and describes operation. Dukes ("Lancet") gives a record of sore throats occurring amongst four hundred adolescents during twenty-five years. Fox ("Lancet") discusses the abortive treatment of quinsy. Lichtwitz (Bordeaux) records a case of angioma of pharynx. Mixer ("Boston Med. and Surg. Journ.") brings forward cases of parotid tumours appearing in fauces. Chappell ("New York Med. Journ.") records three cases of xerostoma. Fournier (Paris) sounds a note of warning in regard to cases of syphilitic infection communicated by and to medical men through instruments, etc. Morrow ("Brit. Med. Journ.") describes three cases of parotiditis associated with pelvic disease. Campbell ("Med. News") treats of pharyngo-mycosis leptothrix. Nicholls ("Amer. Laryng. Assoc.") opened a discussion on the sequelæ of syphilis. Meyer ("Berlin Laryng. Soc.") discusses autoscopy and œsophagoscopy. Beuermann ("New York Med. Journ.") discusses the differential diagnosis between benign lymphosarcoma and malignant lymphomyelia. Grumach (Reisenberg) records a case of hairy pharyngeal polypus. Ebstein (Vienna Soc. Laryng.) exhibited the instrument he employs for œsophageal endoscopy. Gaultier ("Thèse de Paris") treat of pneumococcal affection of the pharynx. Thoyer-Rozat ("Thèse de Paris") has a thesis on retro-pharyngeal abscess in children, describing symptoms and treatment. Egger ("Ann. des Mal. de l'Oreille et du Laryng.") records two cases of velo-palatine insufficiency (congenital). Murray and Walsh

("Med. Rec.") discuss the bacteriology of mumps. Price ("Med. and Surg. Reporter") records a case of foreign body in the œsophagus located by Röntgen rays, and removed. Schmidt (Dusseldorf) discusses cicatricial adhesions of the pharynx and their treatment. Chappel (New York Acad. Med.) read a paper on primary and secondary pharyngeal tuberculosis. Kayser ("Therap. Monats.") has a paper on so-called pharyngo-therapy. Richey ("Ann. of Oph. and Otol.") discusses varieties of treatment under the title of "Fads and Fashions."

Considerable advances have been made in the perfecting of instruments and appliances, and some new instruments have been exhibited and described.

From the above brief *résumé* of the subjects which have been touched upon during the year, it will be evident that no region of the mouth or pharynx has been considered too barren for exploration; no morbid condition too commonplace or too recondite for consideration; and no subject too trivial for investigation and discussion, if it affords possibilities of increasing useful knowledge.

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## NOSE AND NASO-PHARYNX.

BY R. LAKE, F.R.C.S.

**ATROPHIC RHINITIS.**—Capart and Cheval have continued the electrolytic treatment of *Ozæna* which was referred to in the Retrospect of last year. The needles preferred are of copper. The former, in a paper at the Belgian Society of Otology and Laryngology ("Journ. Laryng.," XI., 326), discusses the etiology very fully, in which he does not uphold the tropho-neurosis theory, but attributes it to general nutritive changes. He does not attach any value to vibro-massage, where he has our approval. By the bipolar method of electrolysis, he says, ninety per cent. of the cases can be cured, using a twenty millampère current for twenty minutes. He says also, and which is very important, that in three hundred séances he has had not the slightest accident. Bayer, on the other hand, lost a patient from meningitis, a sequel of hæmorrhagic otitis media, but it seems that this was equally likely to be coincidence as effect. Pocher has tried most remedies without any striking result, and still is open to conviction of the efficacy of any treatment ("Trans. S. Carolina Med. Assoc.," April, 1896, and "Journ. Laryng.," XI., 11). Sattler ("Clin. Chron.," May, 1896) considers the disease to be a true degenerative process of the trophic nerves of the mucosa involved. He advocates simple cleansing. Belfanti and Della Vedova ("Gaz. Med. de Turin") maintain that *ozæna* is due to an attenuated diphtheria bacillus, and also that they have cured cases by injection of antitoxin; whilst Fage ("Rev. de Laryng.") attributes the disease to Löwenberg's *cocco bacillus*.

**MEMBRANOUS RHINITIS.**—This disease appears to be gradually going the same way as "membranous" croup—that is to say, nearly every case appears to show Klebs-Loeffler bacillus in culture; and, indeed, it would be strange were there not organisms found in the membrane

despite the bactericidal mucus, as in a case of pseudo-membranous rhinitis reported by Glover ("Ann. des Mal. de l'Oreille," May, 1896).

**HYPERTROPHIC RHINITIS.**—The only observation of any importance relative to this disease in the treatment advocated by Blondian ("Journ. Laryng.," XI., 333), which is especially adapted to hyperplastic conditions of the inferior turbinate. If partial transfixion is done, a small point is used; if complete, a lance-shaped one. In the latter instance it is passed in to the depth of seven or eight centimètres. The risk of touching the ostium tubæ is by no means slight. In ten cases taken haphazard it occurred in six, in each case setting up temporary ear trouble, tinnitus and fulness.

**PURULENT RHINITIS OF CHILDREN.**—Du Fougerey ("Ann. des Mal. de l'Oreille," Dec., 1895) classes these under two heads—that occurring immediately after birth, and due to gonococcal infection, and that of later date due to staphylococcus. Vomiting is a prominent symptom, and he advises a ten per cent. oily solution of menthol for local treatment. Coulter ("Chic. Med. Rec.," March, 1896) attributes it to uncleanness, syphilis, tubercle or scrofula, or leucorrhœa, and gives pharyngitis, tonsillitis, and bronchitis as usual concomitants, and makes a point of its deleterious influence on the general health.

**NASAL OBSTRUCTION.**—Collier, in a paper, gives his views at length ("Journ. of Laryng.," X., 117), but he added nothing fresh; but in the discussion which followed, Milligan drew attention to the frequency of attic trouble as a sequel to adenoid vegetations. Wright ("Journ. of Laryng.," X., 138) has constructed a manometer to measure the amount of obstruction, and Ruff (*ibid.*) relates a case of facial palsy in which nasal respiration was obviously affected by the paralysis of the nasodilators. Chapard ("Thèse de Paris," 1896) investigates the thoracic and other deformities subsequent to nasal obstruction in children; whilst Escat ("Arch. Intern. de Laryng.," May, 1896) publishes an article on congenital stenosis full of interest and instruction, quoting three cases in which, with severe stenosis, there was no adenoid hypertrophy, the more important symptoms of which are respiratory, auditory, vocal, and intellectual. The auditory, vocal, and intellectual are due to deficient mental development, and as contrasted with the symptoms of acquired stenosis are not amenable to relief by the skill of the rhinologist. Turbinotomy, or as otherwise named turbinectomy, still finds favour with a considerable section of practitioners; and, so far, strange to relate, we have not yet had any report of the injurious effects which might naturally be expected to show themselves in the course of time. Cox ("Brooklyn Med. Journ.," Oct., 1896) adds two cases of redness of the tip of the nose, as a consequence of obstruction.

**SARCOMA.**—Cured cases of this disease are being constantly reported of histologically pure sarcomata, and we are, unfortunately, still much in the dark as to why, in this region, there should be such an immunity from recurrence, although Beuermann ("N. Y. Med. Journ.," Aug. 8., 1896) has, in an able contribution, done not a little towards the solution of

he difficulty. He divides nasal sarcomata (microscopically) into two classes, which he names lymphomyxoma and lymphomyelia, the former benign and the latter malignant. As a main point of differentiation, the benign tumours exhibit a reticulum which is always visible, whilst the more malignant lymphomyelia fail to exhibit this reticulum in the denser portions of the growth, and they have a tendency to more closely resemble a glio-sarcoma in structure, showing numerous coarsely granular protoplasmic bodies.

TUBERCULOSIS.—Hill ("Journ. of Laryng.," X., 309) reports a case with the symptom of hæmorrhage very frequently noticed in these cases, which here, as in the case of sarcoma cure, is almost the rule, and not the exception.

SEPTUM.—The treatment of septal deviations, ridges, and spurs has received a large share of attention. Ballenger ("Journ. Am. Med. Assoc.," Jan. 11, 1896) thus sums up his experience with the use of electrolysis for the reduction of spurs:—The treatment, though effective, is by no means simple, and should only be used where other treatment is not applicable; much experience is required; osteomata are most suitable for this method of treatment, and cartilage than bone, and only small excrescences; perforation may result; the strength of the current is to be from seven to twenty-seven milliampères. Roe ("Journ. Laryng.," XI., 7) treats of these conditions very fully, and shows how changes of nutrition in the septum influence the formation of these affections. He describes the vomer as being formed of two ossifying plates, with a layer of cartilage in the centre, so that any nutritive changes will cause a bulging of the septum. Watson ("Journ. Laryng.," X., 9) insists on mechanical support after operation. Delie (*ibid.*, XI., 207) highly recommends his gouge with lateral guides—an illustration of which will be found in this issue—by means of which spurs are removed with great ease and precision. Bayer and Delstanche have also spoken in favour of this instrument.

TUMOURS.—Noquet ("Journ. Laryng.," XI., 337) reports a case of *Bleeding Septal Tumour*, which proved to be a *Fibro-cellular Telanglectatic Growth*; Harris (*ibid.*, XI., 131), an *Angioma*; and Thompson (*ibid.*, X., 235), a *Spindle-celled Sarcoma*. Sendziak reports a case of *Angioma Cavernosum Sarcomatoides*, and gives a full account of the literature of the subject; and Weil (*ibid.*, X., 43), a *Pure Papilloma* in a woman of fifty-seven years of age.

MIDDLE TURBINATE.—Rousseau ("Journ. Laryng.," X., 243) gives a description of the *Turbinal Bulla*, or *Cornet Ampullaire*, and proposes to call the condition *Pneumatic Hypertrophy of the Turbinate*, and agrees with the generally-accepted opinion that this is a distended pneumatic cell.

RHINORRŒA.—Of the four cases reported during the year, those of Mermod ("Ann. de Mal. des l'Oreille," April, 1896) and Thomson ("Trans. London Lar. Soc.," Dec., 1896) were *Discharges of the Cerebrospinal Fluid*. The former case had a fatal ending. It was complicated with polypi, sphenoidal and antral disease. The patient, after each nasal flux, was relieved of severe headache; it was supposed to come from the frontal

sinus. On exploration of the vault of the nose, the probe passed away up for a considerable distance, as did a canula introduced to collect some of the fluid. Acute meningitis setting in, the patient succumbed. In the latter case the presence of sugar in the fluid seemed to prove the correctness of the diagnosis, and may or not have an important bearing on the general etiology of rhinorrhœa. Fink ("Wien. Med. Presse"), in his case, estimated the flow of fluid in one hour at forty grammes, the specific gravity of which was 1003, again showing an extreme similarity to cerebro-spinal fluid. Poulssen, E. ("Med. Soc. Christiania Reps.," 1895), on the other hand, reports a case which appears to be secretitive in origin, the specific gravity varying from 1006 to 1007, and containing '02 of albumen, and 0'93 of salts, chlorides of iron and soda, etc. Atropine in solution, one per mille, acted very well; ten mille often checking the discharge or lessening the intensity of the attacks. Fink, Paulssen, and others believe the fifth or sympathetic nerves to be the seat of the lesion, or, according to Prof. Daac (*ibid.*), especially the sphenopalatine branch of the fifth.

KAKOSMIA.—Zarniko ("Festsch. des Aertz. Ver., in Hamburg," 1896) says, where this affection is not hysterical in origin, it is sometimes due to accessory sinus disease.

HAY FEVER is attributed by Strangways ("Ann. Ophth. and Otol.," Jan., 1896) to a toxin formed by fermentation of pollen in an alkaline medium, and so uses an acid douche and acids internally, the latter treatment being no novelty; but the local application of acetic acid, even in so dilute a form as two-fifths per cent., is distinctly new.

REFLEX DISTURBANCES are now fully recognized, ocular symptoms being the most frequent. Laurens ("Pr. Med.," Jan. 22, 1896) relates a case of *Blepharospasm* and another of *Convergent Strabismus*, both cured by intranasal surgery directed to the cure of intranasal disease. Lichtwitz ("Ann des Mal. de l'Oreille," Feb., 1896) reports one of strabismus also. Hansell ("Phil. Polycl.," May 23, 1896) and Lichtwitz (*vide ante*) report cases of loss of vision from ethmoidal and sphenoidal disease. Joal ("Journ. of Laryng.," XI, 149) reports a case of a boy who was seized with adductor paralysis from inhaling menthol vapour during sleep.

BACTERIOLOGY.—This field of research has brought forward several interesting and at the same time conflicting results. StC. Thomson, Hewlett ("Lancet," Jan. 11, 1896), and Paiget ("Thèse de Paris," 1896) maintain that the nasal mucus possesses bactericidal power—the latter says great—whilst Klemperer ("Münchener Med. Woch.") supports the opposite theory. He has evidently misread Thomson and Hewlett, for he refers to their eighty cases, whereas in the original it was eighty per cent. Thomson and Hewlett show that the micro-organisms are hurried out of the nose by the combined action of the ciliæ and the quickly-flowing secretion. Turck ("N. Y. Med. Journ.," Nov. 23, 1895) practically corroborates this by the fact that he constantly found bacteria in the naso-pharynx, and he traced the passage of the organisms further by

showing that, in chronic gastritis existing with chronic naso-pharyngitis, the same microbe was found in both stomach and naso-pharynx.

CASEOUS RHINITIS.—Massei ("Arch. Ital. di Laring.," April, 1896) claims that the micro-organism is streptothrix alba, and that it has been isolated from a case of his by Dr. Guarania.

DIGESTIVE DISTURBANCES AND NOSE AND THROAT DISEASES in the acute and chronic forms were very fully dealt with by Brown and French at the May meeting of the American Laryngological Association ("Journ. Laryng.," XI., 65), pharyngeal inflammations and stomach cough, asthma, œdema of the larynx, glottic spasm being the more important of the acute affections.

DISEASES OF THE ACCESSORY CAVITIES.—The year's work contains much of great value, and included in the year must be the discussion at Vienna in 1895 on sinusitis, as it was omitted in last year's Retrospect.

FRONTAL SINUS.—Chiari ("Journ. Laryng.," X., 43) exhibited a case of empyema after operation in a child. Myles ("Journ. Laryng.," X., 144) a case of double frontal sinus disease. On one side the anterior wall was removed, and on the other a free passage was made into the nose. Ripault ("Ann. des Mal. de l'Oreille," Nov., 1895) reports three cases—all right-sided. Lack and Tilley each report a case ("Journ. Laryng.," XI., 88), and Luc ("Journ. Laryng.," XI., 148) another success. Baron (*ibid.*, 186) demonstrated a failure which had come under his hands after the operation. Stoker (*ibid.*, 187), a case treated with oxygen gas, and with gratifying results.

ETHMOIDAL CELLS.—Myles ("Journ. Laryng.," X., 247) has invented a pair of ethmoid clippers for removing the floors of the ethmoid cells, cutting at right angles to the shaft. Mackenzie (*ibid.*, XI., 66) contributes a careful pathological description of the inflammatory processes which take place here. At the Vienna Laryngological Society there was unanimity as to the non-existence of "necrosing ethmoiditis"; but nothing hitherto known was brought to light.

MAXILLARY SINUS, HIGHMORE'S ANTRUM.—Weil ("Journ. Laryng.," X., 37) pronounces strongly against the so-called radical operation. Out of fifty-eight cases reported by Chiari (*ibid.*, X., 38), exploratory puncture was necessary in but fourteen cases; and in only three cases was opening through the canine fossa performed. He had twenty-seven complete cures, and twelve were too recent to speak of. Five times frontal and maxillary sinusitis coexisted. Myles (*ibid.*, XI., 103) was decidedly adverse to curettage of the cavity, unless quite unavoidable, as it frequently aggravated the trouble. Mackenzie (*loc. cit.*) considered that the suction action of the nose was the reason why, even with a dependent opening, pus came through the natural opening if it was patent. Gleitsmann ("Ann. Ophth. and Otol.," April, 1896) says simple cases should be drained through the inferior meatus. Avellis ("Münchener Med. Woch."), in dealing with acute empyema, says that, though spontaneous cure is common, yet recurrence is also common; and he urges that more attention be paid to the history

of the case ; that acute and chronic cases be kept distinct, the former being very readily curable ; and also that, by this means, there would be obtained uniform and reliable information about the relative values of the various operative procedures. Killian (*ibid.*) holds that reliable diagnosis can only be obtained by blowing or syringing out the contents of the cavity. Weil opposes the dental origin of empyema of this sinus ("Journ. Laryng.," XI., 270), and he prefers syringing through the natural opening. Rot ("Journ. Laryng.," XI., 273) agrees as to the origin being more frequently nasal, and also was not a supporter of too radical methods. Rethi varied his treatment, using the natural orifice for the clinical treatment and the alveolar opening for home use.

## LARYNX.

BY J. MACINTYRE, M.B., F.R.S.

This year proves no exception to the rule of great activity in the study of affections of the larynx. The literature has been very extensive, and shows no decrease in volume. New instruments and methods of diagnosis have been brought within the reach of surgeons in the department, and the persevering attempts on the part of those engaged in the special work to ameliorate chronic affections, such as tuberculosis of the larynx, are well worthy of notice. Amongst others we note the following :—

Hubbard and Chappell ("New York Acad. Med.," Nov., 1895, p. 59) give encouraging results by creosote and gentian internally, and sub-mucous injections of creosote into the larynx. Newman ("Lon. Lar. Soc.," Jan., 1896, p. 134) records two cases of cure from local applications of a concentrated solution of iodoform in ether and alcohol. Van Anrooy ("Dutch Lar., Rhin., and Otol. Soc.," June, 1895, p. 203), reports a case of recovery from primary infection by curetting and pure lactic acid. Heryng ("Therapeut. Monats.," Mar. and May, 1896, p. 168) gives a promising report on the application of sulpho-ricinate of phenol in this and other chronic affections. Reference may be here made to Berlioz's original paper in the "Archiv. de Lar.," 1889, p. 6. Hedderich ("Münchener Med. Woch.," p. 286) reports favourable results from paramonochlorophenol.

TUMOURS OF THE LARYNX.—Delavan ("New York Acad. Med.," Dec., 1895, p. 146) records papillomata of the larynx cured by applications of absolute alcohol. Three cases of myxoma have been recorded at the London Laryngological Society's meetings during the year. Angelesco ("Soc. Anat.," Paris, Dec., 1895, p. 273) records a case of epithelioma of the epiglottis. McBride ("Med. Chron.," Feb., 1896, p. 275) records a case of malignant disease of the larynx at the age of twenty-four. Wagner ("Med. Record.," Jan. 4, 1896, p. 276) gives an interesting report upon thyrotomy in a series of cases operated upon during the past twenty years. Delavan ("Amer. Lar. Assoc.," May, 1896, p. 13) discusses the question of recent progress in the treatment of malignant disease of the larynx. He took into consideration the question of whether surgical

effort had or had not shortened rather than lengthened the life of patients suffering from laryngeal epithelioma with indications for better results in the future.

NERVOUS AFFECTIONS.—Bédos ("Thèse de Paris," 1895, p. 85) gives a critical review of laryngeal ictus. The author believes it to be due to a division of the nervous centres through laryngeal reflex action. Semon ("Lond. Laryng. Soc.," Jan., 1896, p. 131), case of bulbar paralysis, progressive muscular atrophy, complete paralysis of left abductor, paresis of right. Parker ("Lond. Laryng. Soc.," Jan., 1896, p. 137) records the presence of laryngeal crises in a case of abductor paralysis. Grabower ("Berlin Laryng. Soc.," Jan., 1896, p. 292), in a contribution to the study of the innervation of the larynx in a case of recurrent paralysis in tabes, holds that the accessories have nothing to do with the innervation of the larynx. By the demonstration of the microscopic preparations the vagus was the only motor nerve in which the roots were much atrophied. The accessory appeared normal.

MISCELLANEOUS PAPERS.—Much useful information has also been given in other departments not classified under the above headings. Kanthack and Drysdale ("Lond. Laryng. Soc.," Feb., 1896, p. 174), when opening a discussion on the nature of the laryngeal complications of typhoid fever, gave some interesting facts upon the clinical and otological aspects of the question. The discussion which followed was also of great interest. At the same meeting the question of foreign bodies in the upper air and food passages was also discussed. Marfan and Hallé ("Rev. Men. Mal. de l'Enfance," p. 212), two cases of chicken-pox eruption in the larynx. Casselberry ("Amer. Laryng. Assoc.," May, 1896, p. 15) discussed the question of intubation of the larynx, with special reference to acute stenosis of the larynx. De Roaldes ("Amer. Laryng. Assoc.," May, 1896, p. 73) records a case of incomplete fracture of the left cornu of the thyroid cartilage from violent manipulation on the outer tissues of the neck to dislodge a foreign body. Holloway ("Med. Mag.," June, 1896, p. [128]) gives an interesting abstract relating to the anæsthetics as employed for operations in the nose and throat. Billot ("Ann. des Mal. de l'Oreille," Mar., 1896, p. 167) gives an analysis of cases in which tracheotomy tubes have fallen into the air passages. Stoker ("Brit. Laryng., Rhin., and Otol. Assoc.," July, 1896, p. 194) opened a discussion on tracheotomy or thyrotomy for foreign bodies in the larynx. Scheff ("Vienna Soc. Laryng.," Jan., 1896, p. 220), fracture of the laryngeal cartilage, the result of an injury. Trifiletti ("Archiv. Ital. di Laring.," 1895, fasc. 3, p. 347), gives the results of his experimental researches on the physiological pathology of the inferior laryngeal nerves, and shows that different results may be obtained according as an animal is or is not anæsthetized, and also according to the intensity and quality of the electrical stimulation.

NEW INSTRUMENTS AND METHODS.—French ("Amer. Lar. Assoc.," May, 1896, p. 11) referred to his earlier work in 1884 in laryngeal photography, and recorded his recent successful work done by means of the 2000 candle-power arc lamp. Macintyre ("Brit. Lar., Rhin., and Otol.

Assoc.," April, 1896, p. 24), crypto-laryngoscope—a fluorescent screen by means of the X-rays applied to the interior of the mouth for examination of the larynx. De Santi ("Lar. Soc.," London, May, 1896, p. 91) describes a new tracheotomy tube for patients who have to wear it permanently, and in whom there is sufficient space to expire through the larynx, though not room for inspiratory effort with valve. Kirstein's autoscope has been used with advantage in a number of cases. Van Anrooy ("Dutch Soc. Lar., Rhin., Otol.," May, 1896, p. 219) tried this instrument, and was able to find a large papilloma in the right vocal cord. He made use of it in other conditions of the larynx. Meyer ("Berlin Lar. Soc.," Nov., 1895, p. 223) also records favourable results with this instrument. Women he considers to be more suitable for the operation than men, and age of no importance. Heymann ("Berlin Lar. Soc.," Jan., 1896, p. 291) records removal of a polypus with this instrument. Katzenstein ("Berlin Lar. Soc.," Jan., 1896, p. 291) describes a new laryngeal mirror to give upright images, called the orthoscope.

(Figures refer to this JOURNAL of this year when not otherwise stated.)

## OTOLOGY.

BY DUNDAS GRANT, M.D., F.R.C.S.

The retrospect presented below is founded almost exclusively on the otological material published in the JOURNAL for 1896, Volumes X. and XI. The reader is requested to note particularly the nature of the abbreviations explained in the list at the end. In each instance the reference to the pages of the JOURNAL OF LARYNGOLOGY is given. This makes the length of each reference unpleasantly clumsy, but the writer has felt it necessary in the reader's interest, in view of the division of the year's JOURNALS into two volumes, whereby the search for the papers or abstracts referred to is rendered more difficult than in previous years.

AURICLE AND EXTERNAL EAR MALFORMATIONS.—*Coloboma of the Auricle* was successfully treated by a plastic operation by Gruber ("Aust. Ot. Soc.," "J. L.," X., 322); and Max ("Aust. Ot. Soc.," "J. L.," XI., 206) rectified a *Malformation in the Form of a Cleft* by paring the edges and stitching. Other cases of malformation are described by Politzer ("Aust. Ot. Soc.," "J. L.," X., 192) and Bezold ("A. of O.," XXV., No. 2, "J. L.," XI., 172), the latter giving the results of the investigation of the *Hearing Power in Cases of Bilateral Atresia of the Auditory Canal with Rudimentary Auricle*.

NEW GROWTHS, &C.—Several interesting cases of *Non-Malignant New Growths of the Auricle* are published by Gruber ("Aust. Ot. Soc.," "J. L.," XI., 203), Urbantschitsch ("Aust. Ot. Soc.," "J. L.," X., 151), and others; and *Malignant Disease* is illustrated in cases under Gruber ("Aust. Ot. Soc.," "J. L.," X., 194), Denker ("A. of O.," XXV., No. 2), Hennebert ("Belg. Soc.," "J. L.," XI., 210), and Dench ("N. Y. Eye and Ear Infirm. Rep.," Jan., 1896, "J. L.," XI., 174).

GANGRENE of the Ear was observed by Bishop ("Journ. Am. Med. Assoc.," March 28, 1896, "J. L.," X., 278) in a child two years of age; and

a peculiar *Periotic Subcutaneous Phlegmonous Œdema* by Gelle ("Fr. Soc.," "J. L.," X., 67). The gravity of the *Prognosis of Insanity complicated by Hæmatoma Aurium* is dwelt on by Pierce Clark ("Am. Med. Laryn. Bull.," Aug. 22, 1896, "J. L.," XI., 357).

FOREIGN BODIES receive general attention from Milligan ("Med. Chron.," March, 1896, "J. L.," X., 282) and Barclay ("Med. News," Jan. 11, 1896, X., 215). Braislin saw *Living Larvæ in the Ear without Previous Suppuration* ("A. of O.," XXV., No. 1, "J. L.," X., 351); as also did Richardson ("A. of O.," XXIV., 3 and 4, "J. L.," X., 217); while Armitage ("L.," Oct. 12, 1895, "J. L.," X., 90) removed *A Large Insect from the Human Ear*. MacNaughton Jones showed drawings and described the appearances in a remarkable case in which *a Hay-seed had sprouted from the Wall of the Meatus close to the Membrane* ("B. L. R. A.," "J. L.," X., 305). In a case under Raoult ("Fr. Soc.," "J. L.," XI., 144), recourse was had to *Opening of the Tympanum for the Extraction of a Foreign Body*.

EXTERNAL AUDITORY MEATUS.—*Exostoses* occurred in interesting cases described by Politzer ("Aust. Ot. Soc.," "J. L.," X., 151) and Urbantschitsch ("Aust. Ot. Soc.," "J. L.," X., 150) and Rutten ("Belg. Soc.," "J. L.," X., 244; and *Hyperostosis* in one by Law ("B. L. R. A.," "J. L.," X., 307), the last being brought before the British Laryngological and Otological Association, where operation was deprecated. Scheibe, in a paper on *Some Tumours of the Ear* ("A. of O.," XXIV., Nos. 3 and 4), describes hairy polypi; and Pegler brought before the British Laryngological, Rhinological, and Otological Association a section of a *Polypoid Growth of Unusual Character from the External Surface of the Membrana Tympani* ("B. L. R. A.," "J. L.," X., 116), showing this rare peculiarity. Courtade ("Ann. des Mal.," Dec., 1895, "J. L.," X., 352) restored the passage in a case of *Occlusion of the Auditory Meatus* resulting from injury to the ear by forceps at birth. A singular case of *Acute Hæmatoma of the Left External Auditory Canal*, apparently due to a vocal strain in an elderly alcoholic subject, is narrated by Arslan ("Arch. Ital. di Otol., etc.," Jan. 1, 1896, "J. L.," X., 277). *Hæmorrhage from the External Auditory Canal*, apparently exuding from the orifices of the ceruminous glands, is considered by Richardson to have been "genuine" in a case under his observation ("Ann. Ophth. and Otol.," July, 1896, "J. L.," XI., 304).

NON-SUPPURATIVE INFLAMMATIONS OF THE MIDDLE EAR.—Any objective addition to our knowledge of the diagnosis of insidious sclerosis of the middle ear, with confirmation by means of *post-mortem* examination, is invaluable, and such is Bezold's *Further Case of Anchylosis of the Stapes diagnosed in Life, with Autopsy, and Manometric and Histological Examination* ("A. of O.," XXV., No. 1, "J. L.," X., 351). In this case Weber's test was positive; Rinne's negative. Bone conduction for low tones was increased; there was extensive defect for air conduction at the lower end of the scale, etc. Hill ("B. M. J.," May 2, 1896, "J. L.," XI., 31) advocates a more frequent use of the Eustachian bougie before giving an absolutely unfavourable *Prognosis in Chronic Non-Suppurative*

*Catarrh of the Middle Ear.* Willetts ("Pittsburgh Med. Rec.," July, 1895, "J. L.," X., 283) directs attention to the probable *Disorganization of the Stapedius Muscle* in some so-called chronic catarrhs, and deprecates too free employment of Politzerization as a routine. The freer use of pilocarpin in chronic aural catarrh is recommended by Martin ("Charlotte Med. Journ.," May, 1896, "J. L.," XI., 303). We can only endorse this opinion in a very restricted number of cases. Miot ("Fr. Soc.," "J. L.," XI., 146) recommends removal of the membrane and the handle only of the malleus as a practicable means of producing a *Permanent Artificial Perforation in the Membrana Tympani*. A *Typical Change in the Tension of the Membrana Tympani in Valvelike Action of the Eustachian Tube*, consisting in a bulging of the postero-superior segment, is described by Gompertz ("Aust. Soc.," "J. L.," XI., 267), and is said to be remedied by treatment of the Eustachian tube, not by incisions in the bulging membrane. The observation is instructive, as explaining the possible mechanism of the positive barometric pressure in the tympanum postulated by Secchi (*vide* JOURNAL, 1895) as the only means of producing the outward convexity of the radial fibres of the membrane.

The occurrence of *Rupture of the Drum from Hanging* is discussed by Lannois ("Fr. Soc.," "J. L.," X., 70). *Double Otorrhagia in the Course of Typhoid Fever* is recorded by Daunig and Malinie ("Fr. Soc.," "J. L.," X., 74).

SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR. ACUTE.—The *Dry Method*, called by Pes and Gradenigo the "rational" treatment, has been tried by Hamon du Fougeray ("Fr. Soc.," "J. L.," X., 68) in a number of cases, the methodical purification of the auricle and meatus, and plugging of the latter with iodoform gauze, having given very excellent results. Huysman ("Dutch Soc.," "J. L.," XI., 218) also supports this. Escat ("Fr. Soc.," "J. L.," X., 67) describes a number of *Cases with Bulging of the Postero-Superior Segment* of the membrane, in which he advises incision, suction with Siegel's speculum, antiseptic dressing, and plugging with sterilized cotton-wool. [The writer has seen such appearances arising from various conditions, and giving rise to the utmost difficulty in diagnosis and prognosis. To start with, the appearance is that of a polypoid granulation, and it may be the form of suppurative inflammation referred to; but, on the other hand, it may be periostitis of the meatus or acute "attic" inflammation.—D. G.] Geronzi points out ("Arch. Ital.," 1895, 328, "J. L.," X., 279) the frequency with which *Facial Hemiplegia* has as its cause *Acute Inflammation of the Middle Ear* if the latter is only sought for. A plea on behalf of greater attention to *Asepsis and Antisepsis in Otology* is uttered by Hollinger ("Journ. Amer. Med. Assoc.," Jan. 18, 1896, "J. L.," X., 31). Acute suppuration of the middle ear, as a *Complication of Typhoid Fever*, has been investigated by Hengst ("Amer. L., R. and O. S.," "J. L.," XI., 105), who found it present in a little over two per cent. of the cases. Heath ("Med. Age," Jan. 10, 1896) refers to its occurrence as a *Sequela of Influenza*, and advises early leeching and the administration of iodide of potassium. A *New Form of Influenza Otitis*, characterized by the

formation of several granulation growths on the membrane, leaving pantherlike rings, is described by Koerner ("A. of O.," XXIV., 3 and 4), the previously known forms being those in which there are hæmorrhagic bullæ or a teat-like projection on the membrane or central mastoiditis. The *Bacteriology of Suppurative Otitis Media* has been investigated by Stern ("A. of O.," XXV., No. 2, "J. L.," XI., 177), but, like Zaufal, he finds no marked relation between certain bacteria and special forms of the disease.

Danziger ("Therap. Monats.," June, 1896, "J. L.," XI., 173) dwells on the importance of attending to the *Nose and Naso-Pharynx* in cases of unilateral otitis, there being sometimes a unilateral naso-pharyngeal or nasal affection maintaining the chronicity. Among other remedies, *Acetanilide as an Antiseptic* is recommended by Somers ("Med. News," April 4, 1896, "J. L.," XI., 55); *Styrone*—a combination of storax and balsam of Peru—by Bolt ("Dutch Soc.," "J. L.," XI., 220); and *Alcohol* by Couetoux ("Ann. des Mal.," Oct., 1895, "J. L.," X., 35). Bean ("L.," Nov. 9, 1895, "J. L.," X., 90), in discussing *Otorrhœa and some of its Complications*, dwells on the need for antiseptic precautions in all the minor aural operations.

Lake ("Med. Press and Circ.," Feb. 26, 1896, "J. L.," X., 280) discusses the question of *Excision of the Ossicles and Membrane* in chronic suppuration of the middle ear; and Moure ("Flor. Cong.," "J. L.," X., 20) describes a case of *Removal of the Drumhead in a Case of Intractable Otorrhœa*. He dwells on the value of cocaine, and on the necessity for antiseptic precautions. Cure effected only after *Removal of the Malleus* is recorded by Bing ("Aust. Ot. Soc.," XI., 205); and Urbantschitsch ("Aust. Ot. Soc.," "J. L.," X., 150) has observed the *Favourable Influence of Extraction of the Malleus on the Auditory Function of the Opposite Ear* secondarily affected. In another case of Bing's a cure was brought about after long duration of the disease by means of the "conservative" treatment. [We presume this consisted chiefly of the local insufflation of boric acid or other antiseptic powder.] The "*Radical Operation*" for the cure of chronic suppuration of the middle ear is discussed by Politzer ("Aust. Ot. Soc.," "J. L.," X., 153, and XI., 256), Clemens ("Rep.," Jan., 1895, "J. L.," X., 161), Bronner ("B. L. R. A.," "J. L.," X., 297; "B. M. A.," "J. L.," X., 259), Guément ("Ann. de la Policlin. de Bordeaux, July, 1895, No. 27, "J. L.," X., 280), and others. Bronner deals particularly with disease of the attic. He recommends that the detachment of the auricle should be effected from above by an incision extending lower down in front than is usually made. The subject of *Cholesteatoma* as a cause of chronicity of suppuration, as well as of danger to life, is of especial importance. Politzer ("Aust. Ot. Soc.," "J. L.," X., 192) brought two pathological preparations illustrating the condition before the Austrian Otological Society. In a case of Lacoarret's ("Fr. Soc.," "J. L.," X., 66) there were well-marked Ménière's symptoms. In a contribution to the diagnosis and treatment of cholesteatoma in otitis media purulenta chronica, Arno Scheibe ("A. of O.," XXV., No. 2, "J. L.," XI., 176) brings evidence in support of Bezold's views that cholesteatoma only follows perforations which are marginal and not central.

*Aural Polypi* and their treatment are considered by Pritchard ("A. of O.," XXV., No. 1, "J. L.," X., 354) and Wilkin ("Clin. Journ.," March 25, 1896). Pritchard describes the Listerian antiseptic precautions advisable before operating. Wilkin extols pyoktanin as an application to malignant polypi. Moure ("Flor. Cong.," "J. L.," X., 20) narrates a case of alarming hæmorrhage attending the extraction of a polypus, which turned out to be a *Cavernous Angioma*.

*Primary Tuberculosis of the Middle Ear* is stated by Bernstein ("Charlotte Med. Journ.," June, 1896, XI., 302) to have occurred twice in his practice.

RESIDUE OF SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR.—*The Closure of Old Perforations* by means of repeated applications of trichloracetic acid, as recommended by Okunneff, has been the subject of experiment with favourable result by Gompertz ("Aust. Ot. Soc.," "J. L.," XI., 268).

THE DANGEROUS SEQUELÆ OF SUPPURATION OF THE MIDDLE EAR.—*Subdural Suppuration* is described by Kaufmann ("Aust. Ot. Soc.," "J. L.," XI., 34) in the perisinus groove, giving rise to pyæmia, and yielding to operation. Lichtenberg ("Hung. O. and L. Soc.," "J. L.," X., 188), and Clayton ("Ann. Oph. and Otol.," July, 1896, "J. L.," XI. 304) have also recorded cases.

*Otitic Pyæmia*, which forms the subject of a large and exhaustive monograph by Prof. Hessler, is illustrated by many cases. Thus we have many *with Sinus Phlebitis* from the practice of Hollinger ("Clin. Med. Rec.," Dec., 1895, "J. L.," X., 217), Walker ("B. M. J.," April 13, 1895, "J. L.," X., 218), Turner ("J. L.," X., 92), Politzer ("Aust. Ot. Soc.," "J. L.," XI., 204), Delsaux ("Belg. Soc.," "J. L.," XI., 208), Adams ("N. Y. Med. Journ.," Aug. 29, 1896, "J. L.," XI., 302), Wall ("Ann. Oph. and Otol.," July, 1896, "J. L.," XI., 304), Lucas ("Birm. Med. Rec.," Jan., 1892, "J. L.," X., 281), Bernard Pitts ("L.," Aug. 10, 1895, "J. L.," X., 91), and Denker ("M. of O.," Sept., 1896, XI., 387). Others have occurred *without Sinus Phlebitis*, as recorded by Deansley ("B. M. J.," April 13, 1895, "J. L.," X., 162), and Giffard Nash ("L.," Aug. 3, 1895, "J. L.," X., 162). The results are most encouraging, and it is a striking fact that otitic pyæmia with metastasis runs a more favourable course than otitic septicæmia without metastasis.

The *Exploration of the Lateral Sinus* is frequently performed as a matter of routine for diagnostic as well as therapeutic purposes. Green ("Bost. Med. and Surg. Journ.," Nov. 21, 1895, "J. L.," X., 162) mentions three cases, in all of which the sinus was found healthy, and the patients all recovered. Langenbuch ("Bull. Med.," Jan. 6, 1896, "J. L.," X., 280) is reported by Lacoarret as recommending the *Ligature of the Jugular Vein* without hesitation in cases where there exists with otorrhœa an obvious source of pyæmic infection. This is surely too absolute a rule, and we believe it is generally held that ligature of the jugular should not be performed unless the sinus is at the same time opened, cleared out, and obliterated in response to the indications afforded by exploration. The diagnosis of *Phlebitis of the Bulb of the Jugular Vein* is still a

matter of considerable difficulty (*experto crede!*), as it may coexist with an apparently normal state of the sigmoid sinus, as shown by exploration and aspiration. Prof. Gruber ("Aust. Ot. Soc.," "J. L.," X., 198) describes an interesting case in which it resulted from acute suppuration of the middle ear without perforation. In relation to this, Kretschmann's description of a *Distinct Form of Tympanic Suppuration* ("Germ. O. S.," "J. L.," X., 263) affecting the depression in the floor of the tympanum exactly over the sinus for the jugular bulb is peculiarly interesting.

CEREBRAL AND CEREBELLAR ABSCESES have received considerable notice, and records of cases are given by Lannois and Jaboulay ("Fr. Soc.," "J. L.," XI., 29), Poulsen ("Hos. Tid.," 1895, No. 38, "J. L.," XI., 119), Gradenigo ("Arch. Otol.," 1893, 484, "J. L.," XI., 34), Hubbell ("Med. Journ.," May, 1896, "J. L.," XI., 174), Bacon ("A. of O.," July, 1895, "J. L.," XI., 355), Treitel ("A. of O.," XXIV., 3 and 4, "J. L.," X., 92), Marchant ("Sem. Med.," Jan. 3, 1895, "J. L.," X., 282), Urbantschitsch ("Aust. Ot. Soc.," "J. L.," X., 323), and Ackland and Ballance ("St. Thomas' Hosp. Rep.," XXIII., 1894, "J. L.," X., 350). Lannois and Jaboulay's case was characterized by hemianopsia, a symptom which enabled them to localize the abscess as affecting the occipital lobe. Treitel discusses multiple cerebral abscesses. Urbantschitsch showed a case of cerebral abscess without focal symptoms, and another of focal symptoms without cerebral abscess! Ackland and Ballance append to the full description of a case of cerebellar abscess successfully treated by operation a *résumé* of all the published cases, and an exhaustive discussion of all the clinical data on which the diagnosis can be found. This is one of the most valuable contributions of the year. Papers and cases dealing with and illustrating the various dangerous complications of ear diseases have been brought forward by Dench ("Amer. L., R., O. Soc.," "J. L.," XI., 107), Gruber ("Aust. Ot. Soc.," "J. L.," X., 195), Mansell Moullin ("L.," Nov. 23, 1895, "J. L.," X., 91), and Pooley ("Amer. L., R., O. Soc.," "J. L.," XI., 93). Gruber dissects the statistics derived from the records of forty thousand and seventy-three *post-mortem* examinations. Pooley pleads for greater attention to the condition of the fundus oculi in suppurative inflammation of the middle ear, with threatening intracranial complications. Vacher narrates ("Fr. Soc.," "J. L.," X., 69) a case in which the most violent "head symptoms" yielded to paracentesis, leeching, and other antiphlogistic treatment. The unusual occurrence of cerebral abscess as a sequela of an acute suppuration of the middle ear is illustrated in cases recorded by Gorham, Bacon ("N. Y. Med. Journ.," Aug. 15, 1896, "J. L.," XI., 302) and Milligan ("A. of O.," July, 1896, "J. L.," XI., 360).

MALIGNANT DISEASE is illustrated by Hennebert's case ("Belg. Soc.," "J. L.," X., 242, and XI., 210), in which *Epithelioma of the Ear and Temporal Bone* seemed to have been initiated by the irritation set up by a foreign body—a piece of slate pencil—in the meatus, and by Dench's cases of *Neoplasms of the Ear* ("N. Y. Eye and Ear Infirm. Rep.," Jan., 1896, "J. L.," XI., 174), which include typical sarcomata.

MALFORMATIONS of the temporal bone of practical as well as anatomical interest have been described by various writers. Gruber ("Aust. Ot. Soc.," "J. L.," X., 197) showed a specimen of an *Abnormal Opening in the Squamous Portion of the Temporal Bone*, such as might have been caused by the pressure of an aneurism of the middle meningeal artery; also one of an *Abnormal Fissure in the Roof of the Tympanic Cavity* (*loc. cit.*); also one of an *Abnormal Cavity in the Petrous Portion* intruding on the groove for the lateral sinus. Politzer brought forward a specimen of *Abnormally Wide Fossa Jugularis* ("Aust. Ot. Soc.," "J. L.," X., 197), a condition favouring puncture of the bulb in paracentesis of the tympanic membrane; and Hartmann various *Dehiscences in the Temporal Bone* ("Germ. O. S.," "J. L.," X., 263). [An acquaintance with these various possible abnormalities is necessary for the understanding of unusual extension of inflammatory process, and of unfamiliar appearances met with during operations.]

INTRATYMPANIC OPERATIONS.—The removal of ossicles in persistent suppuration continues to be frequently practised with encouraging results. Buller reports five cases ("Montreal Med. Journ.," Oct., 1895, "J. L.," X., 90). Urbantschitsch reports one ("Aust. Ot. Soc.," "J. L.," X., 150) of *Extraction of the Malleus arresting the Vertigo and Progressive Deafness*, and another in which it exercised a *Favourable Influence on the Hearing Power of the other (secondarily affected) Ear*. To *Prevent Readhesion of the Top of the Manubrium to the Promontory after Separation*, Gompertz inserts a fine strip of celluloid ("Aust. Ot. Soc.," "J. L.," X., 191).

MASTOID PROCESS.—Means of judging before operation of the condition and structure of the mastoid and petrous bones are naturally much to be desired. Garnault ("Gaz. des Hôp.," March 28, 1895, "J. L.," X., 279), as the result of a large number of measurements, states that there is *no Possibility of determining from the Form of the Cranium of Anatomical Dispositions which render Operations on the Temporal more or less Dangerous*. Okunneff ("Flor. Cong.," "J. L.," X., 17) professes to have obtained indications from *Auscultation of the Mastoid Process with regard to Sclerosis*, a vibrating tuning-fork being placed on the bone at the same time as a flexible stethoscope. Bolt recommends *Percussion of the Mastoid* ("Dutch Soc.," "J. L.," XI., 215). He found a dull sound on percussion in two cases, and on that account suggested operation. This was declined, and after simple paracentesis of the membrane both recovered perfectly. [The value of the method, therefore, remains so far in doubt. But we would remind our readers that the experiments of Koerner and Wild showed that a duller sound was obtained on percussion when the mastoid was hollowed out than when it was filled with paraffin, and that diminution of the normal resonance on percussion indicated disease of the bone itself, no solidification of its cavities.—D. G. Moure ("Fr. Soc.," "J. L.," XI., 29) found the mastoid eburnated fifteen times in thirty-four cases.]

BEZOLD'S MASTOIDITIS.—Perforation of the inner surface of the mastoid process, allowing of the escape of pus into the digastric fossa,

and thence downwards between the layers of the cervical fasciæ first described by Bezold, is illustrated by a number of cases in the practice of Burnell ("Philad. Polyclin.," Nov. 23, 1895, "J. L.," X., 90), Luc (Par. Soc., "J. L.," XI., 326), Mendel ("Fr. Soc.," "J. L.," XI., 248) and Lichtwitz ("Par. Soc.," "J. E.," XI., 326). In Burnell's there was burrowing of pus into the pharynx. Such a condition is apt to be mistaken for retropharyngeal abscess. Luc gives a study of nineteen published cases, adding a fresh one of his own. Holt's ("Am. L. R. O. Soc.," "J. L.," II., 100) case of "*Unusual Perforation of the Mastoid*" was one in which pus found its way into the digastric fossa.

*Cases in which Mastoid Symptoms subsided without Surgical Interference* were published by Mandelstamm ("Ann. des Mal.," March, 1896, "J. L.," XI., 175) and Vacher ("Fr. Soc.," "J. L.," XI., 144), the latter using ice applications and irrigations with weak peroxide of hydrogen. Marchant ("Bull. Med.," Jan. 3, 1895, "J. L.," X., 282) points out the comparative rarity with which otitis is followed by intracranial complications, and counsels great hesitation before adopting severe surgical measures.

Mastoid disease *associated with Diabetes Mellitus* was illustrated in two cases under Urquhart ("Med. News," March 21, 1896, "J. L.," X., 355); and with *Influenza* in one under Szenes ("Hung. Soc.," "J. L.," XI., 42). Spira describes a case of *Central Osteitis of the Mastoid Process running a Latent Course and Presenting the Symptoms of Trigeminal Neuralgia* ("Aust. Ot. Soc.," "J. L.," XI., 249). Another difficulty in diagnosis is illustrated by Sheppard's case of *Hysterical Affection of the Mastoid* ("Am. L. R. O. Soc.," "J. L.," XI., 100). The term *Latent Emphysema of the Antrum* is applied by Raugé ("Bull. Med.," June 24, 1896, "J. L.," XI., 111 and 176) to those cases in which there is a persistent otorrhœa, due to antral suppuration, without external signs of mastoid disease. Lubet-Barhon points out that the *Localization of Inflammatory Processes in the Temporal Bone* ("Flor. Cong.," "J. L.," I., 75) is sometimes limited by the elements out of which the bone is developed, but not by any means as a rule.

Courtade ("Ann. des. Mal.," Feb., 1896, "J. L.," XI., 173) made the observation in a case of mastoiditis with sero-mucous effusion into the mastoid that he could force out the liquid by means of *Siegel's Speculum used not for Suction but for Compression*.

THE MASTOID OPERATION.—One of the most instructive papers of the year was read before the French Society of Laryngology, etc., by Luc ("Fr. Soc.," "J. L.," X., 71) in which he gave the *Results of a Series of Fourteen Cases of Extensive Opening of the Cavities of the Middle Ear by the Stacke-Zaufal Method for the Radical Cure of Obsolete Otorrhœa*. He formulates very excellent rules for the selection, according to the case, of the method of immediate closure, of postponed closure, and of permanent opening. He found the best results to follow frequent dressings. Other communications have been published by Politzer, Bronner ("L.," Nov. 9, 1895, "J. L.," X., 90), Knapp ("A. of O.," XXV., No. 1, "J. L.," X., 352), Guye ("Dutch Soc.," "J. L.," XI., 215), Moll ("Dutch Soc.,"

"J. L.," X., 202, and XI., 217), Gompertz ("Aust. Ot. Soc.," "J. L.," X., 193), Castex ("Fr. Soc.," "J. L.," XI., 140), Reinhard ("Dutch Soc.," "J. L.," X., 201), and others. Knapp discusses further *the Indication for Mastoid Operations in Acute Purulent Otitis Media and its Complications*, which are from the nature of things necessarily somewhat indefinite. He considers cranial exploration free from danger, and to be promptly carried out. Above all, he reminds us of the necessity for exploring the cells of the mastoid process down to the very tip, where, in acute cases, the purulent focus may sometimes be discovered. This is in accord with Politzer's views in regard to the localization of the disease, and of the operation in acute cases, such as those following influenza. Lubet-Barbon publishes a case illustrating this principle ("Fr. Soc.," "J. L.," XI., 28) described as a *Mastoid Abscess without Suppuration of the Tympanum*. The pus was found in the cells nearest the tip of the process. Bronner describes the various modes of operating on the mastoid and their several indications. Moll in his case followed Zaufal's plan of cutting away the membranous postero-superior part of the meatus, which Reinhard considers a waste of epidermic tissue, that might well be employed for papering the cavity. The results seem to be less affected by this than one would be apt *à priori* to expect. Gompertz and Politzer showed cases in which they had employed Koerner's flaps with advantage.

The retention of a *Permanent Mastoid Opening* was practised by Burger ("Dutch Soc.," "J. L.," XI., 219), and in his case there was a permanent closure of the Eustachian tube at its tympanic extremity, of advantage in preventing infection from the naso-pharynx. Urbantschitsch showed *Eight Cases of Radical Operation in which the Retro-Auricular Opening had closed* ("Aust. Ot. Soc.," "J. L.," XI., 202) with satisfactory result.

*For the Preservation of a Retro-Auricular Opening* and the lining of the mastoid cavity, some modifications of Siebenmann's classical operation have been introduced. Marmaduke Shield ("L.," Feb. 8, 1896, "J. L.," X., 282) makes a narrow tongue-shaped flap from the skin on the mastoid, with its attachment above. Passaw ("J. L.," XI., 56) does the same, combined with an ingenious but more complicated arrangement of flaps.

*Novel Modifications* of the mastoid operation have been brought forward by Gellé and Alderton. The former ("Par. Soc.," "J. L.," XI., 325) proposes the use of a chain saw for removing as much as is safe of the posterior wall of the osseous meatus. The latter ("A. of O.," July, 1896, "J. L.," XI., 355) describes a new "antrotome." Lake has put into practice what we consider a most excellent *New Method of dealing with the External Meatus in Operations on the Mastoid* ("A. of O.," July, 1896, "J. L.," XI., 358), namely, the removal of the cartilage of that part of the meatus from which the flaps are to be formed, leaving a non-resilient therein and sufficient epidermic lining. Guye narrates an interesting case in which he treated, by the modern more radical methods a recurrence after a temporarily successful employment of conservative measures twenty years previously ("Dutch Soc.," "J. L.," XI., 215). Politzer gives ("Aust. Ot. Soc.," "J. L.," XI., 258) a *Description of the Methods*

of Operation, and of the Modifications indicated by the Different Pathological Conditions in the Temporal Bone; also Contributions ("Aust. Ot. Soc.," "J. L.," XI., 25) to the Operative Opening of the Cavities of the Middle Ear. In these he shows the advantages of the modern modifications over the original operation as devised by Schwartze, and which made such a noteworthy epoch in the development of otology. He further warns his junior against forming too optimistic expectations as to the curative effect of radical operations. Urbantschitsch ("Aust. Ot. Soc.," "J. L.," XI., 259) gives the results of seventy-two cases of the radical operation observed by him during a year and a half. In general, the views expressed by Luc in the paper above referred to find support.

Bevan reminds us ("Journ. Am. Med. Assoc.," April 11, 1896, "J. L.," X., 351) that the facial nerve lies in a plate of bone between the external meatus and an opening directly into the antrum, whence the necessity for caution in chiselling, as already familiar to the readers of Gellé's detailed account of the "casing" of the facial nerve in a former volume of this JOURNAL. Rousseau and Hennebert ("Belg. Soc.," "J. L.," XI., 211) offer, among other points, a new guide in the operation of *Antrectomy*, viz., that the floor of the aditus to the antrum is in the same horizontal plane as the highest point of the attachment of the membranous to the osseous meatus, and that the centre of the antrum lies five millimètres behind the posterior wall of the meatus. *Accidental Opening of the Lateral Sinus in Mastoid Operations* is illustrated by the histories of four cases given by Chiucini ("J. L.," X., 278, "Hidi Otol." (*sic*), 1895, p. 55), in which the hæmorrhage came during the curetting, and was successfully checked in every instance by plugging with iodoform gauze. The *Late-stitch* (postponed suture) after *Artificial Opening of the Mastoid*, proposed by Gruber, continues to give him satisfaction ("Aust. Ot. Soc.," "J. L.," X., 196).

INTERNAL EAR.—Randall points out the *Importance of Recognizing Labyrinthine Deafness* ("Philad. Polyclin.," Feb. 8, 1896, "J. L.," X., 282) in view of the damage done by inflation if such cases are erroneously treated as obstructive. Similarly, Ostman warns us against committing error and injustice by leaving it out of account when testing with a view to detecting suspected malingering ("M. f. O.," Sept., 1896, "J. L.," XI., 360).

*Anæmia of the Labyrinth* is diagnosed by Lermoyez when<sup>2</sup> inhalation of nitrite of amyl produces improvement ("Fr. Soc.," "J. L.," XI., 29). Milligan describes a case of *Cochlear Apoplexy* ("B. L. R. A.," "J. L.," X., 113).

Bonnier has studied the *Variations of the Patellar Reflex in certain Labyrinthine Affections* ("Sem. Med.," No. 3, 1896, "J. L.," XI., 192). and the *Mutual Relations of the Ampullary Apparatus of the Internal Ear and the Oculo-Motor Centres* ("Bull. Med.," May 18, 1895, "J. L.," X., 278).

*Necrosis of the Labyrinth* is reported by Connal ("Glasg. Med. Journ.," Sept., 1895, "J. L.," X., 161), by Rueda ("Rev. de Laryng.," March 15, 1896, "J. L.," XI., 120), and Urbantschitsch ("Aust. Ot. Soc.," "J. L.," X., 324)) with important observations on the hearing power.

*Labyrinthine Disease due to Constitutional Affections* is illustrated by Dasque's *Two Cases of Deafness following Mumps* ("Gaz. Hem. de la Soc. Med., Bordeaux," Feb. 3, 1895; "J. L.," X., 278). Downie's *Case of Total Deafness of Sudden Onset*, of syphilitic origin, with autopsy ("Glasg. Med. Journ.," Jan., 1896; "A. of O.," XXV., No. 1; "J. L.," X., 279 and 356). Falt reports the *Post-Mortem Appearances in a Case of Ménière's Disease due to Leukæmia* ("Aust. Ot. Soc.," "J. L.," XI., 36), in which the auditory nerve had chiefly suffered, although the account of the cochlea seems rather unsatisfactory. Compaired ("Rev. de Laryng.," May 16, 1896; "J. L.," XI., 118) makes interesting remarks on the diagnosis of *Infantile Labyrinthitis* from typhoid and from meningitis.

Cases of *Ménière's Disease* are reported by Kaufmann ("Aust. Ot. Soc.," "J. L.," X., 193) and Gevaert ("Belg. Soc.," "J. L.," XI., 336). Lemairey found *Ménière's Syndrome cured by Pilocarpin* ("Ann. des Mal.," Nov., 1895, "J. L.," X., 281), but in our abstract there is no definite statement as to the cure of the deafness. Alt describes an *Apoplecticform Labyrinthine Disease in Caisson Workers*, with an interesting discussion as to the mechanism ("Aust. Ot. Soc.," "J. L.," XI., 264); and Politzer a *Case of Traumatic Lesion of the Labyrinth, showing Ménière's Complex of Symptoms, with Demonstration of the Histological Appearances* ("Aust. Ot. Soc.," "J. L.," XI., 251). Gruber proposes limiting the use of the term "Morbus Ménièrei" to the typical cases of effusion into the labyrinth, and to the many cases of other nature he would apply the name of the disease with the additional terms "with Ménière's symptoms" ("Aust. Ot. Soc.," "J. L.," X., 153). [We have found the term "pseudo-Ménière's disease" easily understood.—D. G.]

**AUDITORY NERVE AND CENTRES.**—Cases of **PSYCHICAL DEAFNESS** were brought before the Austrian Otological Society by Heller ("J. L.," XI., 198), Urbantschitsch ("J. L.," XI., 200), and Dalby ("B. M. J.," Mar. 16, 1895; "J. L.," X., 162). Ransom ("B. M. J.," May 4, 1895; "J. L.," X., 163) and Deknatel ("M. f. O.," 1895, No. 12; "J. L.," X., 216) have reported instructive cases of *Hysterical and Functional Deafness*. A remarkable *Case of Bilateral Facial Paralysis with Absolute Deafness*, following typhoid, but in a syphilitic subject, is reported by Middleton ("Glasg. Med. Chir. Soc.," Oct. 18, 1895; "J. L.," X., 255).

Kreidl demonstrates the uncertain gait, etc., in a *Cat in which both Acoustic Nerves had been Destroyed a year previously*, according to a modification of Ewald's method ("Aust. Ot. Soc.," "J. L.," XI., 36).

**VERTIGO.**—Gellé discusses the *Treatment of Labyrinthine Vertigo*, whether of congestive, anæmic, or reflex origin ("Fr. Soc.," "J. L.," XI., 142), dwelling on the indications derived from medical examination of the various organs—heart, kidneys, liver, stomach, etc. Burnett views most chronic cases as *Tympanic Vertigo* ("Philad. Polyclin.," May 2, 1896; "J. L.," XI., 172), the ultimate treatment being extraction of the incus. Barr gives an instructive account of *Giddiness and Staggering in Ear Disease* ("B. M. J.," Dec. 28, 1895; "J. L.," X., 216). Guye brings forward a *Hitherto Undescribed Form of Rotatory Sensation in Labyrinthine Disease* ("Dutch Soc.," "B. M. A.," 1895, "J. L.," X., 257), in

which the surrounding objects appear to rotate in a vertical plane like the hands of a clock. Siethoft ("Dutch Soc.," "J. L.," X., 332) professed to have met with identical symptoms in a case of chronic catarrh of the middle ear with hypertrophic rhinitis. They disappeared on the application of cocaine to the inferior turbinated bodies. Von Stein describes in great detail the *Disturbances of Equilibrium in Diseases of the Ear* ("A. of O.," XXV., No. 1). He associates dynamic equilibrium with the semicircular canals; static equilibrium with the sacculæ. Gaylord Clark gives a study of the *Equilibrium Function of the Ear* ("Trans. Med. Soc. of State of New York," 1896; "J. L.," XI., 117), founded chiefly on experiments on the dogfish carried out by Lee, of Columbia.

TINNITUS AURIUM.—Angieras attributes certain subjective noises to what he considers a *Synæsthetic Origin*, generally in the sensory nerves of the face and head, and curable by electricity and massage applied to these nerves ("Fr. Soc.," "J. L.," X., 65). Richey traces the *Etiology of Tinnitus Aurium* in many cases to ankylosis of the ossicles, which he treats by means of large doses of iodine preparations ("Journ. Am. Med. Assoc.," Jan. 4, 1896; "J. L.," X., 217). Schwager describes a case of *Objective (Perceptible) Noise in the Ear* due to the well-known clonic spasm of the tensor palati ("M. f. O.," Feb., 1896; "J. L.," X., 354). The *Electrical Treatment of Tinnitus Aurium* is detailed by Lewis Jones ("A. of O.," XXIV., 3 and 4) with judicious limitations of its scope. Gomez treats *Tinnitus Aurium with Coniine Hydrobromate* ("Ann. Oph. and Otol.," Oct., 1895, and Jan., 1896; "J. L.," X., 216), while Harris found a most intractable case of quinine tinnitus to yield to the cataphoric application of cocaine ("Manhattan Eye and Ear Hosp. Rep.," Jan., 1895).

TESTS FOR HEARING, DIAGNOSIS, ETC.—Barth discusses the so-called "*Lateralization*" in *Bone-conduction* ("Germ. Ot. Soc.," "J. L.," X., 264), distinguishing the subjective from the objective, and refusing to attribute it to hyperæsthesia of the nerve. Alt ingeniously employs the patient's humming voice with closed lips instead of the tuning-fork on the vertex as a *Test for the Determination of an Obstruction to the Conduction of Sound* ("Aust. Ot. Soc.," "J. L.," X., 195). Werkovsky gives the results of laborious examination of the *Duration of Hearing throughout the Musical Scale in Diseases of the Internal and Middle Ear* ("A. of O.," XXV., No. 2; "J. L.," XI., 177), and Alderton on the *Upper Tone Limit in the Normal and Diseased Ear as determined by the Galton Whistle* ("A. of O.," Jan., 1896; "J. L.," XI., 53). *A Few Exceptional Auditory Fields* produced by Zwaardemaker ("Dutch Soc.," "J. L.," X., 332) seem to support the idea of there being an analogy between paracusis and hemeralopia. Moure and Bordier describe ("Rev. Internat. d'Elect., Feb. and March, 1896, 253; "J. L.," XI., 119) an *Electro-Telephonic Acoumeter*.

REFLEX AURAL DISTURBANCES.—Mounier ("Fr. Soc.," "J. L.," X., 66) has noted a form of disturbance due to an *Exaggeration of Auricular Synergy*, which the students of Gellé's writings will readily understand. Bonnier has observed three cases of a *Form of Deafness, a Genital Reflex*

"Fr. Soc.," "J. L.," XI., 30), in a subject of inguinal hernia, a monorchid, and a masturbator respectively.

INJURIES OF THE ORGANS OF HEARING.—Urbantschitsch has published a case of *Revolver-shot in the External Meatus* ("Aust. Ot. Soc.," "J. L.," X., 324). It produced facial paralysis, which was greatly benefited by digital percussion of the affected muscles. Ménière saw two instances of *Tympanic Membrane Ruptured* by indirect cause ("Par. Soc.," "J. L.," X., 254); Fritts one of *Old Fracture of the Handle of the Malleus with Fibrous Union* ("Philad. Polyclin.," Dec., 28, 1895; "J. L.," X., 216); Root one of *Bilateral Hemorrhage from the Labyrinth through the External Auditory Canal due to a Cranial Fracture* ("Am. L., R., O. Soc.," "J. L.," XI., 109). Politzer's cure of traumatic lesion of the labyrinth with Ménière's symptoms is referred to elsewhere (*vide* Internal Ear).

DEAF-MUTISM.—Ottolenghi pleads for a higher *Legal Status* being accorded to deaf-mutes as regards acting as witnesses in courts of law and as citizens in general. These remarks are perhaps more called for in Italy than here ("Flor. Cong.," "J. L.," X., 24). Scheibe gives two valuable contributions to the *Histology of Deaf-Mutism* ("A. of O.," XXIV., 3 and 4; "J. L.," X., 92 and 218). Ransom describes a remarkable case of *Functional Deaf-Mutism* in a man of nineteen instantly cured by Faradism ("B. M. J.," March 2, 1895; "J. L.," X., 163). Lavrand draws attention to cases of *Mutism without Deafness*, to be treated by suitable educational methods ("Fr. Soc.," "J. L.," XI., 148).

ANATOMY.—Lake, in a *Note on the Anatomy and Pathology of the Periosteum of the Ear* ("J. L.," X 61), shows some interesting relations: as, for instance, the continuity of the middle layer of the membrane with the periosteum of the annulus and external meatus, as also with that of the Eustachian tube. Chiucini has devised an ingenious *Method of making Anatomical Sections of the Temporal Bone* ("Flor. Cong.," "J. L.," XI., 245). Cheatle, showing the "*Mastoid*" Antrum to be a Part of the Middle Ear ("A. of O.," July, 1896; "J. L.," XI., 356), recommends that it should be rechristened "tympanic" antrum. Cannien Coyne has revised the *Histology of the Organ of Corti*, and shows the membrane of Corti to be formed mainly by the cilia of the auditory hair-cells ("Journ. d'Anat. et Phys.," May, June, 1895; "J. L.," XI., 173).

REMEDIES, INSTRUMENTS, ETC.—*Carbolized Gelatine Amygdala Aurium* have been made for Pollak ("Aust. Ot. Soc.," "J. L.," X., 325). *Guaiacol Oil* is recommended by Laurens for use in Otology, Rhinology, and Laryngology ("Ann. des Mal.," Jan., 1896, "J. L.," X., 353), *Styron*, by Bolt, in chronic suppuration of the middle ear—a balsamic preparation ("Dutch Soc.," "J. L.," XI., 220); *Oxygen Gas* by Stoker ("B. L. R. A.," "J. L.," X., 108); and *Electricity in Certain Affections of the Ear*,—notably acute cases which "hang fire"—by Mounier ("Fr. Soc.," "J. L.," X., 66). Texier advises a *New Method of Administering Bromide of Ethyl* so as to produce "apsychia" rather than profound narcosis ("Fr. Soc.," "J. L.," X., 74). Todd has found *Hypnotism* of assistance in quieting an unruly patient during the dressing of a mastoid

operation-wound ("Journ. of Amer. Med. Assoc." Jan. 4, 1896, "J. L.," X., 218).

Among new instruments we may note Quinlan's *New Adenoid Forceps* ("J. L.," XI., 59), Molinie's *Magnifying Glass to Fix upon the Finger* ("Fr. Soc.," "J. L.," X., 69), Helot's *New Acoumeter*, graduated by means of diaphragms with larger or smaller openings ("Fr. Soc.," "J. L.," X., 70), and Zwaardemaker's improvements on *Toynbee's Otoscope* ("Dutch Soc.," "J. L.," X., 331).

MISCELLANEOUS.—The *Paracusis Willisii* has received special study by D'Aguzzo ("Flor. Cong.," "J. L.," X., 26), and Zwaardemaker ("Dutch Soc.," "J. L.," XI., 220). Hammerschlag ("Aust. Ot. Soc.," "J. L.," XI., 268) and Donaldson ("L.," Oct. 10, 1896; "J. L.," XI., 357) have observed *Movements of the Membrana Tympani* synchronous with pulse and with respiration. *The Degree of Hearing Power necessary for Telephonists* has been found by Zwaardemaker to be seven mètres for whispered voice ("Dutch Soc.," "J. L.," X., 331).

Many other papers of varying degrees of interest have appeared, and it will be obvious from the record given above that the study of otology is being pursued with considerable activity in all parts of the world. For one reason or another we have been able to publish reports of the meetings of the Austrian Otological Society of unusual interest and richness. We trust that we shall be equally favoured in the future, and we hope that in this country we may soon see awakened a similar enthusiasm for the further prosecution of otology in its various aspects, whether as an isolated art calling for specially-trained eyes and fingers, or as a part of the general science and art of medicine associated with such sister specialities as neurology, epidemiology, and others.

We append a list of the works on otology which have been reviewed in the pages of this JOURNAL during the past twelve months, and a table of the abbreviations employed in this Retrospect. It will be observed that the indication of the page and volume of the JOURNAL, in addition to the original source of the paper, has been given in every instance to facilitate reference for those who have bound the JOURNALS in two half-yearly volumes.

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#### BOOKS ON OTOTOLOGY REVIEWED IN VOLUMES X. AND XI.

- GARNALT. "Précis des Maladies de l'Oreille" ("J. L.," X., 47).  
 LEWIS-JONES. "Medical Electricity: a Practical Handbook for Scientists and Practitioners" ("J. L.," X., 165).  
 COZZOLINO. "L'Otoiatría, la Rinoiatría, e la Laringoiatria nelle Università della Germania e dell'Austria" ("J. L.," X., 220).  
 PASSOW. "Eine Neue Transplantations-Methode für die Radikaloperation bei Chronischen Eiterungen des Mittelohres"—"A New Transplantation Method," etc., ("J. L.," XI., 56).  
 PRITCHARD. "Diseases of Ear" ("J. L.," XI., 121).

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#### ABBREVIATIONS.

"J. L."—"Journal of Laryngology, Rhinology, and Otology," the Roman numeral (X. or XI.) indicating the volume, the Arabic one the page.

- "Flor. Cong."—The Fifth International Congress of Otology, Florence, September, 1895.  
 "Fr. Soc."—The French Society for Laryngology and Otology.  
 "L."—"Lancet."  
 "A. of O."—"Archives of Otology."  
 "Aust. Ot. Soc."—Austrian Otological Society.  
 "Hung. O. and L. Soc."—Hungarian Otological and Laryngological Society.  
 "Dutch Soc."—Dutch Society of Laryngology, Rhinology, and Otology.  
 "M. f. O."—"Monatschrift für Ohrenheilkunde."  
 "Belg. Soc."—Belgian Society of Otology and Laryngology.  
 "Par. Soc."—Parisian Society of Otology and Laryngology.  
 "Germ. O. S."—German Otological Society.  
 "Arch. Ital."—"Archivii Italiano di Otologia."  
 "Ann. des Mal."—"Annales des Maladies de l'Oreille, de la Gorge," etc.  
 "B. L. R. A."—British Laryngological, etc., Association.  
 "Arch. Inter."—"Archives Internationales de Laryngologie," etc.  
 "Am. L., R., O. Soc."—American Laryngological, Rhinological, and Otological Society.

## X RAYS IN OUR SPECIAL DEPARTMENT.

BY J. MACINTYRE, M.B., F.R.S.

This new force, which has attracted so much attention, has been applied to the diagnosis of affections in our special department. While photography was at first employed, it soon became evident that fluorescent screens would, in some instances at least, be of great value. As in many other departments, it was first employed to detect the presence of foreign bodies; in March of the present year the methods had been so much improved that shadows of metallic objects could be seen through the trunk. (Macintyre, British Laryngological Association, April, 1896, a shadow of a coin in the gullet opposite the third dorsal vertebra, seen first on the fluorescent screen, and afterwards photographed). White, later on in the year, described a similar case in the "Annals of Surgery" for 1896. The application of the rays was tried in the soft tissues, and at the same meeting above referred to a photograph through the side of the living neck was shown, on which one could see the base of the tongue, hyoid bone, epiglottis, arytenoid cartilages, spine, cavity of the pharynx, and entrance to the trachea. Rowland and Waggett have also published papers on this subject (Lond. Laryng. Soc.), "Brit. Med. Journ.," 10th April, 1896). The hard tissues of the face, such as the superior and inferior maxillaries and the accessory cavities, have also been seen in shadow and photographed. In one case destruction of the hard tissues from malignant disease was clearly made out. Deformities in the cervical region causing disturbance in the region of the throat, enlargement of the heart, and even the sacs of aneurism have all been demonstrated, either by means of photography or the potassium or barium platino-cyanide screen. Focus tubes for the mouth have been suggested by Thomson, Newton, and others. Fluorescent screens have likewise been made for placing within the buccal cavity. These have been

devised with a view to the detection of changes in the teeth, contents of the nostrils, deviations of the structure in the maxillary bones, and the seat of foreign bodies in the throat and nose. With improvements in the apparatus and greater force at our disposal, Prof. Röntgen's great discovery promises to do more than was at first anticipated in the diagnosis of affections of the upper respiratory tract.

### THYROID, ETC.

BY A. H. ROBINSON, M.D.

The therapeutical treatment of enlargements of the thyroid glands and certain allied conditions has been pursued during the past year with very marked results. A large number of such cases have been placed on record and the various methods adopted set forth. Those methods have included the ingestion of the substance of the thyroid body and the thymus gland of the sheep. Extracts of those organs have also been used in a dry form and in alcohol-glycerine. Finally, the tabloids so much in vogue have been largely employed. The effects produced by these various preparations in nearly all the cases reported have been as striking as ever, but have not, however, proved in any appreciable degree more permanent in character than in others previously recorded.

The inevitable relapse so often chronicled has in very many instances been in evidence. Whatever the precise method of treatment made use of, the parenchymatous forms of the disease are those which have proved most amenable. In myxœdema there has been either a proneness to recurrence when the remedy has been discontinued or it has altogether resisted the action of the remedy employed. Thymus gland, which appears to have been chiefly used in exophthalmic goitre, follows the same rule—more or less early improvement, followed by rapid recurrence of symptoms on cessation of the use of the gland, being the rule.

In McKie's ("B. M. J." March 14, 1896) case treated thus, where there was practically no enlargement of the thyroid, but only marked exophthalmos, this latter symptom was markedly relieved. Unfortunately, however, it tended to recur when the thymus tabloids employed were withheld.

In other cases of similar nature thyroid extract was exhibited with permanent improvement, even cure resulting. In one such, however, the symptoms had ensued after the performance of ovariectomy, and were so much exaggerated when the thyroid extract was made use of that its discontinuance became imperative. This was one of a series of interesting cases of Graves' disease reported by this writer ("Am. Med. Surg. Bull.," July 11, 1896).

In a case of goitre occurring in the practice of Angerer ("Münch. Med. Woch.," 4, 1896), death occurred soon after the use of thyroid extract was commenced, and was due, in the opinion of that observer, to heart paralysis, which again he attributed entirely to the action of the remedy. A similar result was observed in a case of myxœdema complicated with angina pectoris, reported by Morris ("Lancet," Sept. 24, 1895), minus the fatal termination. The patient was a man, forty-eight years of age. So

markedly was the angina intensified by the thyroid treatment that it had to be discontinued.

In the treatment of cretinism, some encouraging results have been obtained in that least encouraging of maladies, and there are records of improved growth, enhanced walking power, development of speech, and an all-round improvement in general appearance, growth of hair, and even of mind. These very striking manifestations are only on a par with the results obtained experimentally with the healthy subject, and are significant of the presence of a powerful active principle in the tissues of both the thymus and the thyroid. In both organs the active principle appears to consist largely of iodine, which has been demonstrated by Baumann (*"Münch. Med. Woch.,"* 14, 1896; *"Zeitsch. f. Phy. Chem.,"* Band 21), and dealt with by him in a series of papers.

In the opinion of Hennig (*"Münchener Med. Woch.,"* No. 17, 1896) and others, however, the effects of the extracted matters are not so constant as those produced by the ingestion of the actual gland tissue, and in their experience disagreeable symptoms—cerebral, cardiac, and others—are prone to follow the employment of the artificial products. This thyro-iodin is said to be combined in the gland with albumen and globulin. It has also been found in the thymus of the calf. In some forms of enlargement of the thyroid—notably in the colloid—iodine is said to be diminished in amount. The physiological effects produced by the introduction of thyro-iodin into the organism results in an increase in the phosphoric acid excreted, with a similar increase in the excretion of nitrogen, chlorine, and sodium chloride. Further than that, there is an increase in the decomposition of albumen, and probably of fat also. Other effects produced by it through the nervous system have already been mentioned, and these may be produced directly, or, as has been suggested, by the toxic effects of putrefaction, and such effects are apt to be alarming in character. Some of the physiological effects produced by the ingestion of thyroid gland were well exemplified in a case of Langfeldt (*"Raus. Med.,"* No. 13, 1896), wherein a butcher, accustomed to a diet of roasted pig thyroid, experienced an ever-increasing weakness and loss of weight until the cause was suspected. With the withdrawal of thyroid from his dietary the symptoms, so profound, but for some time inexplicable, entirely disappeared.

The further investigation of this important subject will be watched with much interest, and is full of promise.

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## SOCIETIES' MEETINGS.

### THE BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

Dr. WILLIAM MILLIGAN, *President, in the Chair.*

(Continued from Vol. XI., page 325.)

Mr. WYATT WINGRAVE. *Case of Paralysis of Left Vocal Cord.*

The patient, a healthy-looking man, aged thirty-nine, attended five weeks previously at the Central London Throat and Ear Hospital for a sudden attack of hoarseness, of four weeks' duration. He stated that when commencing his work one morning "something gave way in his throat," and since then he had suffered with hoarseness, pain in left shoulder, with tingling and numbness in the left arm and inner two fingers. His occupation was that of a brewer's drayman, but had been a seaman and a fireman. There was no history of gout, rheumatism, or syphilis.

On examination the left vocal cord was seen to be fixed in the cadaveric position, the larynx being otherwise normal. On auscultation a loud, rasping, systolic bruit could be heard below the outer third of the left clavicle, but palpation and percussion were negative. The left external jugular vein was markedly distended and varicose, whilst an ill-defined swelling was felt, apparently involving the carotid sheath, somewhat tender on pressure. The left radial pulse appeared to be somewhat smaller and later than the right, but they were both so feebly defined that sphygmograms were unsuccessful. He had dyspnoea on exertion, but no dysphagia. His voice was rasping and "squeaky," and had not varied since the attack nine weeks ago. The pupils remain equal. For five weeks he had been treated with pot. iodide and digitalis, without any marked change.

Mr. MAYO COLLIER said he had only been able to make a more or less rapid examination of the patient. However, two points were certain in this case: there was paralysis of abduction, more or less fixation in the adducted position, and hoarseness. Added to this Mr. Collier thought he recognized some thickening of the arytenoid cartilage and invasion of the cord near the vocal process. *Prima facie* three causes presented themselves: syphilis, malignant disease, and pressure on the course of the recurrent laryngeal nerve. Syphilis in the larynx directly affecting the arytenoid joints might be excluded, there being no dysphagia, a most constant symptom of gumma of the arytenoid cartilage. Then, again, it was impossible to exclude malignant disease in the absence of any positive state of things causing pressure on the recurrent.

Mr. Collier suggested that a case like this was hardly one to give a definite opinion on. It was more a case for watching.

Dr. MILLIGAN said that he fully agreed with Mr. Mayo Collier's remarks that a satisfactory diagnosis of the cause of certain paralytic

conditions of the left vocal cord could only be made after a most thorough and systematic examination of the patient. Even then the cause was often a matter of great doubt. He would like to suggest that in the case of Mr. Wingrave's patient the paralysis of the cord might be an early indication of tabes dorsalis.

He had seen cases where such a state of affairs had been the case, and where fixation of the cord had preceded all other symptoms of tabes for a considerable time.

He had under his care at the present time a man who had paralysis of the left cord, a nerve lesion which had preceded any definite objective evidence of tabes for at least two years. This patient he had had under observation for at least five years altogether, and only within the last two years or so had the patient become distinctly tabetic. In this particular case there was a definite history of syphilis. As Mr. Browne had remarked, we must not be led astray that the cause of the paralysis may not be syphilitic, even although treatment by iodide produces no effect. In many such cases by the time the patient comes under observation fibroid changes of such a nature may have taken place that no amount of treatment of any kind will do any good whatsoever.

In answer to Mr. Mayo Collier, Mr. WINGRAVE thought that the paralysis was due purely to extrinsic causes, and that the apparent asymmetry of the arytenoids was due to alteration of the perspective rather than to any local changes.

Dr. DUNDAS GRANT read notes of a *Case of Mastoid Disease where Operation had given almost Immediate Relief to Symptoms of Nausea and Persistent Headache.*

The antrum was found to be very much enlarged and full of granulations and cheesy matters. The outer and posterior walls of the osseous meatus were removed so as to make free communication between the meatus and the antrum.

Dr. WILLIAM HILL: Perhaps Dr. Grant will tell us if he has had any experience of immediately closing up the wound behind the auricle, thus dispensing with the drainage tube and relying on the meatus for drainage. Bates had reported several cases in which he had sealed up the wound with a preparation of collodion after Stacke's operation.

Dr. MILLIGAN said that, in such cases, he preferred to use the gouge and the mallet rather than the burr. For the completion of the operation, however, and for the opening up of any recesses connected with the middle ear, attic, and mastoid antrum, he found the burr a useful instrument. He was in the habit of using gouges of various sizes, working under illumination from a limelight apparatus. He considered that many of the objections to the use of the mallet and gouge—such as producing cerebral concussion, rupturing the walls of intracranial abscesses, etc.—were largely hypothetical. In the after-treatment of such cases he was in the habit of dressing the parts by way of the external meatus. At the time of the operation he inserted silver sutures into the mastoid wound, but he did not tie them. At the first dressing, however, these sutures were tied. In some cases, where he had sewn up the mastoid incision at the time of operation, he had

had subsequently to cut the stitches on account of inflammatory swelling, etc. In dividing the posterior cartilaginous wall of the meatus he found it a useful plan either to cut down upon a solid india-rubber plug, previously introduced into the meatus, or to cut with a curved bistoury (probe-pointed) from within outwards.

Mr. LENNOX BROWNE briefly reported a *Case of Laryngo-Fissure*.

The operation was recently performed on a single lady, aged thirty, from whom a growth—judged at the time to have been benign—had been removed by the intra-laryngeal snare in January, 1891. The voice had only become affected six weeks before attendance was resumed on October 1st, 1896, when recurrence was observed of an apparently similar neoplasm, and in the same situation as on the former occasion. The later operation had been done solely on the result of microscopical examination, and the period that elapsed between the two procedures was only six days.

The microscopical reports by Mr. Wingrave are appended. They offer an additional point of interest in that whereas it was in the experience of all that a superficial fragment of a really malignant growth frequently appears to be benign, it is rare for the surface tissue to exhibit features pointing to malignancy which are not to be observed in the deeper structures.

Moreover, the increased activity noticed at the surface in the examination of the mass enforces the wisdom of Newman's injunction, that before removing a fragment for a preliminary examination the patient should be prepared for the speedy adoption of the more radical procedure should it be indicated. Whatever may be the subsequent history of the case, the performance of laryngo-fissure could not be otherwise than beneficial to the patient.

#### MICROSCOPICAL REPORTS BY Mr. WINGRAVE.

No. 1—October 2nd, 1896. "The portion of tissue which you sent me this morning is composed for the most part of densely-packed stratified epithelium, arranged in concentric masses ('nests'), and judging from this feature I fear the process is malignant in nature."

No. 2—October 8th, 1896. "The four portions weighed 11 grains (the largest one being 7 grains). The smaller fragments consisted of mucous membrane and blood clot. The larger fragments consisted of a mass of branched and spindle-shaped connective tissue cells interspersed with densely-packed elastic fibres—evidently the substance of the vocal cord. The surface was covered with stratified epithelium, considerably thickened, and arranged in the form of nests, some of which were solid, and some contained a vascular core. In places there was much indentation of the epithelial covering, causing with the irregularities of the thickening a fimbriated appearance.

"In other places the cells formed blunt promontories, connected with the main mass with constricted pedicles.

"The cells composing these papillary nodules were for the most part normal as regards their size and their nuclei, but where the indentations

occurred the cells were irregular in size, shape, and contents, being vacuolated, multinucleated, and irregular in their arrangement. In the substance of the sub-epithelial tissue, here and there stray masses of epithelium formed isolated groups.

"There were no well-defined epithelioma nests. Small cell inflammatory tissue was present in well-marked quantity, but no indication of giant cells. Skeletal muscle fibres and mucous glands appeared very scanty, while small blood extravasations were numerous.

"The foregoing characters indicate a neoplastic process of slow growth, which shows indications of a recent activity and irritability. The want of stability which the epithelium shows in certain parts is strongly suggestive of a transition from what is evidently a simple papillary growth to one of a more active nature. The limits of the epithelial growth have evidently been reached in the operation, and removal is complete."

In describing the details of the drawings made from his preparations, Mr. WYATT WINGRAVE remarked that this case illustrated the great difficulty so often experienced by the pathologist in interpreting the nature of a neoplasm from structural evidence alone.

Dr. MILLIGAN said that Mr. Browne's case was peculiarly interesting from the fact (1) of the successful result after operation, and (2) on account of the importance of the microscopical examination. With regard to this second point, experience was much more frequently in favour of the microscopical examination of the portion of growth removed revealing a less serious state of affairs than was really the case. This was, no doubt, due to the fact that in many such examinations only superficial portions of the growth had been removed and examined. In Mr. Browne's case the reverse was the case, and, consequently, the case was the more interesting. He was fully in accord with what Mr. Browne said as to the necessity of warning patients beforehand that the result of the microscopical examination might be such as to make it necessary to have a radical operation performed *immediately*. The irritation caused in some cases by removal of only small portions of growth was sometimes of such a nature as to cause rapid advancement of the morbid process. Hence, in the face of a gloomy microscopical report, no time should be lost in removing entirely the diseased tissue wherever possible.

#### *Demonstration of Kirstein's Autoscope.*

Dr. MILLIGAN said that Kirstein's method of laryngeal autoscropy was a method by means of which a *direct* image of the intralaryngeal structures could be obtained, and not a *reflected* image such as is obtained by the use of the ordinary laryngoscope. The instrument employed for the purpose consisted of rectangular tongue depressor, about five inches long and one inch broad, the distal extremity being rounded and smooth, so as not to injure parts with which it came in contact. The distal extremity was notched, the notch being for the purpose of receiving the median glosso-epiglottic ligament. The proximal end carried a rectangular shank, which fitted into a slot upon the handle of the apparatus. Sliding upon the spatula was a hood (made of various heights) which served the purpose of keeping the teeth, the lips, and in man the

moustache away from the spatula, and which allowed room between the two plates for inspection and for introducing instruments. The handle consisted of Casper's electroscope. Within the handle was a small electric lamp with a camera lens for focussing the rays of light, and also a prism, by means of which the light was deflected through an angle of ninety degrees. In this way the light was thrown along the spatula, and so into the pharynx.

To make a complete examination the electric circuit is first completed, and then the surgeon, holding the instrument in his hand, introduces it into the mouth and depresses the tongue well. The first movement (*pharyngoscopy*) is nothing more than what may be accomplished by an ordinary tongue depressor. In this way the ordinary picture of the pharyngeal cavity is obtained. In the second movement (*autoscopy of the lower portion of the pharynx*) the instrument is pushed rather farther backwards, while the handle is elevated and the tongue depressed. In this way the anterior surface of the epiglottis, the valliculæ, and the pharynx behind the base of the tongue is brought well into view.

In the third movement (*autoscopy of the larynx and the trachea*) the handle of the instrument is still more elevated, so that the roof of the hood touches the incisor teeth, while the tongue is being continually pressed downwards and forwards. The pressure produces an elevation of the epiglottis, so that we can now see the pyriform sinuses, the arytenoid cartilages, the ary-epiglottic folds, the posterior surface of the epiglottis, the ventricular bands, the vocal cords, and in some cases the trachea, and even the bifurcation of the bronchi.

In many cases the pharynx and the base of the tongue will have to be well sponged with a solution of cocaine before the patient can tolerate the examination. One of the main advantages of this method of examination appears to lie in the fact that a *direct* view of the posterior laryngeal wall can be obtained—a matter of the greatest importance to the laryngoscopist. The method is also said to be of great value in the examination of the larynges of children.

Mr. LENNOX BROWNE showed a *handy Case of Instruments*, made to his design by Messrs. Mayer and Meltzer, for examination of the throat, larynx, nose, or ear, for purposes of diagnosis, and for the treatment not only of all emergencies to be relieved by local applications or other medication, but also of others requiring actual surgical procedures, such as laryngeal scarifying, tracheotomy, removal of polypus of the larynx, nose, or ear, of foreign bodies in the aural or upper respiratory passages, evacuations of mastoid or other abscesses, etc. The case measures 12 inches by 8 by 3 deep, and contains no less than fifty instruments, many of them being adapted for dual purposes. Both case and instruments are constructed with a view to insure as far as possible against sepsis.

Mr. LENNOX BROWNE also showed a *Lingual Tonsillotome*, differing from that of Brady in that the ellipse of opening in the female blade was in the transverse diameter, and that the cutting blade was two-edged as first devised by Liston, and since adopted for all tonsillotomes used by the exhibitor.

Mr. LAKE showed a *Combined Continuous Syringe and Spray*, the apparatus being capable of being used for either purpose.

Dr. HARRY CAMPBELL. *Breathing in Singers.*

The controversy which has so long waged regarding the proper method of breathing for singers is not likely to end until we arrive at a correct understanding of, and accurately define, the different modes in which breathing may be carried on. I shall, therefore, devote a considerable portion of my paper to an elucidation of this subject.

The thorax is enlarged by an elevation of the ribs, and by descent of the diaphragm. The former increases the sagittal and lateral diameters, while the latter causes enlargement in the vertical direction.

It is possible to dissociate these two methods, breathing either by elevation of the ribs alone, or by descent of the diaphragm alone. Contraction of this latter tends to elevate the lower ribs, but it is possible to check this latter movement, so that diaphragmatic contraction shall cause protrusion of the belly without any costal elevation. Such a breath we term "abdominal," which term, it will be observed, is therefore not synonymous with "diaphragmatic," as applied to breathing.

Costal breathing falls under two kinds: (a) the total costal, or, if I may be allowed the hybrid term, "pancostal," and (b) the lower costal. In the former the clavicle is raised, and with it all the ribs. When such an inspiration is carried to its extreme the ribs are elevated to their utmost, and the chest cavity is increased to its maximum. In the lower costal variety, on the other hand, the clavicle is kept fixed, expansion taking place chiefly by elevation of the lower ribs. It must, however, be mentioned that when a *full* costal inspiration is taken with fixed clavicles the bony thorax apparently expands to its very summit.<sup>1</sup>

There are thus three primitive types of breathing in the normal chest, and three only: pancostal, lower costal, and abdominal. Much confusion will be avoided if we keep this fact clearly in mind. The so-called clavicular variety, about which so much has been written, is, so far as I can see, impossible under normal conditions. In it the chest is said to expand in its upper part chiefly or only, movement involving chiefly, or being confined to, the upper ribs; but, so far as I can see, it is absolutely impossible under normal conditions to expand the upper part of the chest chiefly or alone, since the lower ribs must ascend with the upper, and this implies expansion of the lower chest. When, however, the lower part of the chest is tightly bound with a rigid corset it is necessarily incapable of proper expansion—if, indeed, of any expansion at all—and under these circumstances a costal inspiration causes an enlargement of the upper chest chiefly or only. This part of the chest undergoes a compensatory enlargement and mobility in those who habitually tighten, and this undue mobility of the upper chest is observed in such even after the corset has been removed.

<sup>1</sup> It is difficult to say whether the first pair of ribs ascend under these circumstances. If they do the breath would, of course, be a pancostal one, and might be known as "pan-costal with fixed clavicle." Nevertheless, I shall for convenience speak of it in this paper as "lower costal" breathing, seeing that in it expansion takes place chiefly at the base of the bony thorax, and seeing that there is some doubt, at least, whether the first pair of ribs do actually ascend.

I repeat that it appears to me impossible for the normal individual to expand the upper part of the chest greatly in excess of any other part, and still more impossible to expand it—except, perhaps, to a very small degree—alone. This is a point, however, on which I am anxious to have the opinions of members. Cathcart tells us that the Italian teachers lay great stress upon the expansion of the upper chest, and advise the singer to direct to it all his attention in breathing, so as to expand it more than any other part. To this end the shoulders are held back that the scapulæ may afford *points d'appui* for the serratus magnus, which under these circumstances becomes a costal elevator, and there are, of course, other muscles capable of raising the upper ribs. I refer here to muscles actually inserted into the ribs, and not to those which raise the ribs indirectly by lifting the clavicles and collar-bones. These tend to raise all the ribs equally.

Now I make no doubt that it would by practice be possible to gain such control over the superior costal elevators as to cause the upper ribs to be raised during inspiration more than the lower ones, and thus expand the upper chest more relatively to the lower than would be otherwise possible. It must, however, be remembered that the lower ribs are compelled to follow the upper ones, and this necessitates a considerable expansion of the lower chest.

Costal and abdominal breathing may be associated. After a full pancostal breath, it is doubtful whether in the normal individual any additional air can be inspired by means of the diaphragm—the quantity must in any case be small. In other words, the lungs are not large enough to fill the thorax at its potential maximum, *i.e.*, with the ribs elevated and the diaphragm depressed to their respective extremes. I say in the normal individual, by which I mean one with freely movable ribs and healthy lungs. If the ribs are not freely movable, so that a deep costal inspiration is impossible, the individual may be able to take an appreciable abdominal breath after he has raised the ribs to the utmost. Similarly in “large-lunged” emphysema, the lungs may be large enough to permit of considerable abdominal breathing after a full pancostal inspiration.

While, however, after such an inspiration, abdominal breathing is in the normal individual practically impossible, it is possible after an incomplete inspiration of this kind, though only in a limited degree.

Abdominal breathing may in a similar way be associated with lower costal breathing, and here also the abdominal breath is limited. The fact is, expansion of the lower bony thorax causes a flattening of the diaphragm, which necessarily curtails the range of abdominal breathing. Nevertheless, lower costal and abdominal breathing may be associated in varying degrees: thus a complete lower costal breath may be associated with a moderate abdominal breath, and again an almost complete abdominal inspiration with moderate lower costal expansion.

To turn now to the various methods of breathing which have been recommended for singers. They are not always very lucidly expounded, but they may, I think, be referred to one or other of the following heads:—

1. *The clavicular (pancostal)*: expansion occurs in the upper part of the chest chiefly, or alone.
2. *The lower costal*: the lower ribs are raised without any protrusion of the belly, the clavicles being kept fixed.
3. *The lower costo-abdominal*: the lower ribs are raised and the belly protruded, the former being the essential event.
4. *The abdominal*: the belly is protruded, the ribs being fixed.
5. *The abdomino-costal*: the belly is protruded, and the lower ribs raised; the former being the essential event.

1. *The clavicular type*.—In this the clavicles are raised, the chest being supposed to expand chiefly, if not entirely, in its upper part. I have already observed that this mode of breathing is only possible in those who tight-lace. The so-called clavicular type in men, and in women who do not constrict the waist, is none other than the pancostal. Joal, whose book “On Respiration in Singing” has recently been rendered into English by Wolfenden, does not make it altogether clear what he means by clavicular breathing. He speaks of it as “being only partial respiration of the summit of the thorax” (p. 78), a view shared by others; and he asserts that more air can be inspired by the abdominal than by the clavicular method (p. 6), a statement one can well believe if the chest expansion is strictly confined to its upper part, but otherwise certainly wrong. On the other hand, he tells us that the abdomen is *strongly* drawn in during clavicular breathing (p. 35), the diaphragm being aspirated upwards (p. 117), and the diagram he gives of clavicular breathing (p. 48) shows actual elevation of the diaphragm. Now, such extreme retraction of the belly with upward aspiration of the diaphragm can only occur as the result of very decided pancostal inspiration. Again he cites as an instance of clavicular breathing the case of an excellent baritone, who breathes “by dilating the *whole* of the thorax and raising his upper ribs” (p. 56), a statement equally irreconcilable with his definition of clavicular breathing.

Now, Mr. President and gentlemen, if so earnest and capable a worker as Joal—one who is not only a member of our own profession, but a distinguished laryngologist, and the author of the latest and most up-to-date work on breathing for singers to boot—if such a one can make the matter no clearer to us than this, it shows how confused must be the notions prevailing on the subject among less skilled men—above all, among the singing laity—and how necessary it is for those treating of this subject to define their terms accurately.

Doubtless many *women* are clavicular breathers in the sense that expansion of the bony thorax takes place chiefly in the upper part of the chest, because the lower chest cannot expand adequately when the stays are worn tight. The quantity of air thus inspired is said to be less than by the other methods. The so-called clavicular breathing in *man*, on the other hand, necessitates a considerable expansion of the entire bony chest; it is essentially a pancostal breath. I am at a loss to understand how Joal and Lennox Browne arrive at the conclusion that this mode of breathing in the man provides a smaller volume of air than the other methods. I find that much more air can be inspired by

pancostal breathing than by any other method, and it is for this reason that I believe some singers of the old Italian school must have adopted this method, for, as Joal informs us, some of them "executed passages exceeding ninety-five seconds. Farinelli, for instance, executed passages composed of three hundred notes without taking a breath" (p. 93). I do not think it probable that any man could execute so long a passage in one breath, except by the pancostal method. Joal, however, argues that the old Italian school adopted the lower costal method, and he rightly observes that the fact that they recommended retraction of the belly (which is pronounced in pancostal inspiration) while taking a breath, is no proof that they practised clavicular breathing, seeing that such retraction occurs in lower costal breathing as well.

2. *The lower costal type.*—In this the clavicles are kept fixed and the ribs are raised, expansion taking place chiefly in the lower part of the chest, the diaphragm not descending. This is the method, so far as I can understand, described by Mayo Collier, and recommended by him and by the late Sir Morel Mackenzie,<sup>1</sup> though they are silent as to whether the clavicle should be raised or not.

In this method the abdomen is drawn in (rendered concave) by a contraction of the abdominal muscles, and it is argued that thereby "the vault of the diaphragm is supported by the great abdominal walls, and maintained in position by the liver, spleen, and great end of the stomach" (p. 94). In this way the central tendon of the diaphragm is fixed, and the contraction of its muscle fibres, which pass more or less vertically from the central tendon above to the ribs below, spends itself in raising the lower ribs, and in expanding the lower bony thorax. It will thus be seen that Collier does not recommend any descent of the diaphragm; he explicitly states that it remains raised.

[A word as to the voluntary retraction of the belly to which Collier refers as a necessary preliminary to lower costal inspiration. There are two ways of drawing in the abdomen; one is to take a deep costal (preferably pancostal) breath. As a result of this the diaphragm is aspirated upwards, the abdominal cavity is enlarged vertically, and its anterior walls fall in in consequence. This is the mechanism of the abdominal retractions which Morel Mackenzie and Collier refer to as taking place with muscular effort. It is essentially, I believe, a secondary and not, as they assume, a primary phenomenon. The other variety of abdominal retraction is due to a voluntary contraction of the transversely disposed muscle fibres in the abdominal walls—to wit, the transversales and the middle portions of the obliqui interni. The action of these fibres has not, so far as I know, been hitherto studied; suffice it to say that their contraction is capable of bringing the front and back walls of the mid-abdomen in firm and close contact, so as to shut off the upper from the lower belly, and thus press the stomach, liver, etc., against the diaphragm.]

I have said that Mackenzie and Collier do not make it clear whether they allow elevation of the clavicle. A very slight elevation of the clavicle during a lower costal breath adds considerably to the volume of air that can be inspired, and there can be no doubt that many singers, who, for

the most part, adopt the lower costal method, and who would indignantly repudiate the accusation of being clavicular breathers, do appreciably elevate the clavicles, especially when desirous of taking a more than usually deep breath.

Cathcart, indeed, advises that the inner ends of the clavicles should move upwards and forwards with the sternum; his method being in other respects similar to that described under this heading. In this way, he contends, not only is the entrance to the thorax above enlarged, but the bony chest is rendered capable of considerable expansion in its upper as well as in its lower part.

3. *The lower costo-abdominal.*—In this variety the lower costal breathing is combined with varying degrees of abdominal breathing, but the latter is subsidiary to the former, and only occurs in comparatively slight degree, causing a moderate protrusion in the epigastrium. It should be mentioned that some degree of epigastric protrusion is apt to occur whenever a deep costal inspiration is taken. This may result from two causes—either from an active descent of the diaphragm, or from an elevation of the lower end of the sternum above the central tendon of the diaphragm, causing the heart to lie immediately under the epigastric wall.

I believe I am correct in identifying Joal with the method of breathing described under this heading, though he does not make it absolutely certain whether he recommends actual descent of the diaphragm, merely remarking that “the convexity of the diaphragm tends to be effaced” (p. 80). The belly, he contends, should be retracted in the sub-umbilical region, and while the clavicles are kept fixed the ribs are elevated to their fullest extent and the epigastrium protruded (presumably from active descent of the diaphragm). This form of breathing Joal somewhat ambiguously designates the “costal” type, and he gives it his enthusiastic support.<sup>1</sup> The retraction of the sub-umbilical region he refers to “a voluntary contraction of the inferior fasciculi of the abdominal muscles” (p. 117),<sup>2</sup> and its object is to support the diaphragm below, and to enable it to devote the entire force of its contraction to the elevation of the lower ribs, as already described. To the same end some singers compress the belly by means of a band or belt.

Joal assumes that the upper ribs are stationary in this type of breathing, but, as already observed, fixation of the clavicle by no means prevents expansion of the upper chest, as anyone may see for himself who will examine the bare chest while a full costal breath is being taken with fixed clavicles.

It is contended by Joal that this method of breathing secures the largest volume of air by expanding the chest in its most roomy part. I find that much more breath can be taken by a pancostal inspiration.

<sup>1</sup> According to Joal, Lennox Browne now recommends “an increase in the inferior part of the chest and upper part of the abdomen; the abdominal swelling should be limited to the epigastric region”; and Joal actually claims Browne as recommending the same type of breathing as he does himself. It is not, however, clear from the passage quoted whether the abdominal or the costal breath is meant to take precedence.

<sup>2</sup> It is due, I believe, to a contraction of the transversely disposed muscle fibres of the anterior abdominal wall, as already described; a contraction of the lower portions of the recti would tend to pull down the ribs and sternum, which are required to be raised in the form of breathing under discussion.

In Joal's method, expansion of the bony thorax is the primary fact, the abdominal breathing being subsidiary to it. The largest available abdominal breath is not taken, for after a complete inspiration of this kind, additional air can be inspired by a vigorous contraction of the diaphragm. I may remark in passing, the ribs may then be observed to be actually drawn in.

4. *The abdominal type.*—In this the breathing is as far as possible purely abdominal, *i.e.*, the diaphragm contracts with relaxed abdominal walls, and being thus only slightly supported on its under surface, the force of its contraction is chiefly spent in thrusting the abdominal viscera downwards, and in increasing the vertical capacity of the chest, and to only a small extent in an upward tug on the ribs (which are probably prevented from being raised by a contraction of certain muscles, such as the quadrati lumb. and the serrat. post inferiores). At all events, while contraction of the diaphragm tends to raise the ribs, even with relaxed abdomen, there can be no doubt, as Mandl observes, that "when the person is completely master of diaphragmatic breathing, deep inspirations can be taken without elevating the ribs in any manner, as Majendie had already said."<sup>1</sup>

Abdominal breathing is closely associated with the name of Mandl, who in 1855 advocated this mode of breathing in an article which appeared in the "*Gazette Médicale*," though it had already been largely practised. He obtained a wide following, and in schools of singing most strange devices were resorted to for the purpose of fixing the ribs and compelling pure abdominal breathing. The pupils "were made to sing while lying down on mattresses, sometimes with weights more or less heavy placed on the sternal region; masters were even said to make a practice of seating themselves familiarly upon the chests of their pupils. In the schools were to be seen gallows, with thongs and rings for binding the upper half of the body, or the pedio apparatus, rigid corsets, kinds of pillories which enclosed the frame and fixed the ribs."<sup>2</sup>

Abdominal breathing is said to be rarely employed by women. Joal has not met with a single woman singer who adopts this method. Nor is this surprising when we reflect that the corset interferes with the abdominal protrusion.

5. *The abdomino-costal.*—The abdominal type of breathing, pure and simple, is probably very rarely employed. I doubt if it ever is. I cannot believe that Mandl and his school confined themselves to pure abdominal breathing. It is probably always supplemented by costal breathing. This mode of breathing we may term abdomino-costal, and it is the one recommended by Lennox Browne and Behnke in their work on "*Voice, Song, and Speech*." At a meeting of this Society in 1892, the former gentleman observed that "diaphragmatic breathing might be followed up by costal extension, and this was always taught by Behnke and himself."<sup>3</sup>

I now propose to briefly criticize these various modes of breathing with a view to discovering which is the most suitable for the singer. I must at once confess that I do not at present see my way to very

<sup>1</sup> Joal, *ibid.*, p. 67.

<sup>2</sup> *Ibid.*, p. 48.

<sup>3</sup> JOURNAL OF LARYNGOLOGY, June, 1892, p. 226.

specialy recommend any one method to the exclusion of the others. What I have been most concerned to do in this paper is to accurately define the different modes in which breathing may be carried on, and to clear the ground for profitable discussion.

Practically all writers condemn forced clavicular breathing in the case of the man, but there are some who justify its employment in the woman on the erroneous assumption that it constitutes for her the normal type of breathing.<sup>1</sup> The evils of forced clavicular breathing are self-evident, necessitating, as it does, elevation of the shoulders, and (from the contraction of the cervical muscles) compression of the important structures entering the thorax from above. The effort of lifting the entire thorax and upper extremities with every inspiration is tiring; the interference with the return of blood from the head during a loud and long-sustained note may be so great as to cause turgidity and even duskiness of the face; and it is, moreover, doubtful whether expiration can be so nicely regulated as by the other methods. Lennox Browne and Behnke have well insisted upon these points. If pronounced clavicular breathing is ever justified, it should certainly only be employed on rare occasions, and as an extension of the more usual form of breathing.

It is otherwise with lesser degrees of clavicular breathing. I can see no objection to a moderate elevation of the inner ends of the clavicles. This not only enlarges the superior opening of the thorax, but favours the expansion of the upper portions of the chest. Cathcart recommends this procedure, and he sets great store by the full expansion of the upper part of the chest, on the grounds that the nearer the resonating cavity is to the seat of voice production, the better resonance does it give.

It is certain that moderate clavicular breathing is frequently employed by those who claim to be lower chest breathers, and it seems at least doubtful whether the singer should rigidly adhere to the hard-and-fast rule never to raise the clavicles in the slightest degree.

Accepting, then, the dictum that pronounced clavicular breathing can only be justifiable on rare occasions, we have to inquire as to which of the other methods is the best. Is it (*a*) the pure lower costal? (*b*) this, extended by abdominal breathing (and, if this form, how much abdominal extension is justifiable)? (*c*) the pure abdominal? or, finally (*d*) the abdominal extended, the lower costal (and, if the latter form, how much lower costal is justifiable)?

In seeking an answer to our question, we, of course, attach some weight to the amount of air that can be inspired by the various methods, but not too much. The singer is not required to distend his chest to the utmost.<sup>2</sup> Were a large volume of air the great desideratum, then a pan-costal breath would be the best, for by it half again as much air can be inspired as by any other method.

I propose to make some observations as to the quantity of air which professional singers expire in singing, *i.e.*, as to the amount of their tidal air. I believe it will be found to be smaller than is generally supposed—

<sup>1</sup> Such a one is Hamonic, quoted by Joal, *op. cit.*, p. 59.

<sup>2</sup> Joal argues as if it were necessary to take in a very large volume of air. See *op. cit.*, pp. 72, 80, 134.

say, from 150 to 200 cubic inches. Of course we must be careful to distinguish between the expired air and the total quantity of air which the singer is capable of expiring after he has taken a breath, this being the air expired *plus* the reserve air; for it need scarcely be observed that the singer should never use his reserve air in voice production.

The following table gives the quantity of air which can be taken in by the different modes of breathing in my own case. I must mention, however, that it is extremely difficult to make accurate observations on this head, because it is by no means easy to always breathe by any particular method without encroaching on another. Thus, in pure abdominal breathing we must make absolutely certain the ribs do not move; the result in this case, moreover, depending upon the degree of expansion of the bony thorax while the abdominal breath is being taken. For these and other reasons I cannot but receive the figures which have been published relative to this question with some reserve. To mention only one instance, Joal<sup>1</sup> gives the abdominal and costal respiratory capacities of three experienced singers as follows:—

| Abdominal. |          | Costal.  |
|------------|----------|----------|
| 5200 cc.   | .....    | 5300 cc. |
| 4300 cc.   | .....    | 4800 cc. |
| 4000 cc.   | .. ..... | 4300 cc. |

In the first case, that is to say, the proportion is as 52 to 53. I have no doubt whatever that in this, and indeed in all three cases, the abdominal inspiration was supplemented by a lower costal breath, otherwise the disproportion would be very much greater.

*Pancostal*..... 400 cub. in.

*Lower costal* ..... 210 cub. in. ... This can be extended by allowing the inner ends of the clavicles to move upwards.

*Lower costal, supplemented by abdominal* ..... 210-270 cub.in. According to the degree of diaphragmatic descent.

*Abdominal*—Thorax kept fixed in its mean position... ..... 110 cub. in.

Thorax kept fixed in position of costal expansion ... 170 cub. in.

Thorax kept fixed in lower costal expansion ..... 90 cub. in.

*Abdominal, supplemented by lower costal expansion*... 110-270 in. ... According to the degree of lower costal expansion. 200 cub. in. are inspired by a full abdominal breath, making no effort to prevent expansion of the lower chest, nor to cause it, the ribs not passing beyond the mean in inspiration.

It will be seen from the above that pure abdominal breathing gives a very small volume of air, but that if this method of breathing is supple-

<sup>1</sup> Op. cit., p. 90.

mented by lower costal inspiration, as it practically always is, it may give as large a volume as the latter method.

It is argued that the lower thoracic method is superior to the abdominal in that the work is shared by a large number of muscles, for in abdominal breathing these are more or less confined to the diaphragm and the abdominal muscles. Speaking from my own feelings, I should say that the very reverse is the case. An abdominal breath can be taken with the utmost ease, while a lower costal breath involves an appreciable effort, seeing that the ribs have not only to be raised, but also to be bent.

It is also argued that in the abdominal method expiration requires the expenditure of greater muscular energy than the lower costal variety, in order to push up the viscera, which are displaced downwards by the descent of the diaphragm—an argument of no weight, seeing that these organs are capable of resuming their normal position upon mere relaxation of the diaphragm, without any contraction of the abdominal muscles, being drawn up by the elastic recoil of the lungs.

We have now to inquire whether the abdominal or costal method enables the singer to regulate the outgoing blast of air with the greater precision and nicety. The air, as we know, has to be driven out slowly and steadily (*i.e.*, without jerks), and with varying degrees of intensity. As Paul Bert observes: "To allow the escape through the glottis of such a volume of air as is precisely necessary to produce the desired effect, is one of the difficulties of the singer's art."<sup>1</sup>

How is this regulation effected? Cathcart contends that in the case of costal breathing it is, or should be, effected by the mutual antagonism between the expiratory muscles and the false vocal cords, which approximate in order to oppose the outgoing blast of air; and he attaches great importance to this laryngeal impediment, seeing that—so he argues—without it, it would be impossible to get that degree of condensation of pulmonary air necessary to bring out the best quality of tone. It is, however, more generally held that the regulation of the expiratory blast is essentially dependent upon the antagonistic action of the inspiratory and expiratory muscles, and this is probably the case in abdominal and in pronounced clavicular breathing. Cathcart holds that in the form of breathing he recommends the inspirators cease to contract when expiration begins, the air being held by the false vocal cords; but according to the prevailing view the inspirators continue in action, though with diminishing force, throughout the entire period of expiration no matter what mode of breathing is adopted. Of the two sets of muscles, however, it is held that the expirators act the more powerfully, and thus expel the air, the force of expulsion and consequent loudness of note depending upon the excess of inspiratory over expiratory action. In delivering a note *fortissimo*, for instance, the expirators act with full force, the inspirators undergoing considerable relaxation.<sup>2</sup>

Now it is argued that much better control can be exercised over the expiratory blast by the costal than by the abdominal method, which, according to Cheval, Morel Mackenzie, and others, is apt to give a jerky note, owing to the inability on the part of the diaphragm to undergo a

<sup>1</sup> Joal, *op. cit.*, p. 92.

<sup>2</sup> Joal, *op. cit.*, p. 97.

gradual and even relaxation. This is, of course, a question for experience to decide, but I see no theoretic reason why the diaphragm should not be taught to relax gradually, as well as other muscles. Indeed, this argument regarding the inability of the diaphragm to undergo gradual and even relaxation may be employed against the lower costal methods, seeing that the supporters of it contend that the diaphragm is an important agent in expanding the lower bony chest.

I have already mentioned that Cathcart considers it very important for the singer to expand the upper part of the chest well, on the ground that the efficiency of the chest as a resonator is thereby increased. This authority contends that in a costal breathing the air is driven out of the lower regions of the lungs faster than from the upper lobes, and that "the upper ribs will only be pulled down when the lower lobes are nearly exhausted, and it is then time to renew the breath." In this way, Cathcart contends, the high resonating properties of the expanded upper chest are maintained throughout expiration. I have not yet had the opportunity of testing the accuracy of this view. I will only here observe that the upper ribs must, to a large extent, follow the lower.

It has further been contended that abdominal breathing may induce serious disturbances in the abdomino-pelvic viscera. In this form of breathing the diaphragm descends to its furthest limit, and remains contracted throughout the whole of expiration, during which time the abdominal muscles are contracted also, in order to expel the air. This leads to considerable compression of the abdominal and pelvic organs, and, according to Cheval,<sup>1</sup> all sorts of troubles may thus result, such as hernias, indigestions, and disorders of the abdominal circulation. Joal describes the case of a woman at twenty-two who was in perfect health, and "able to sing with impunity up to the day when she fell into the hands of a fanatical professor of abdominal respiration," after which dysmenorrhœa, which was found to depend upon reversion of the uterus, set in <sup>2</sup>(p. 74). In another case the most violent form of dyspepsia was similarly induced. He quotes from other authors to the same effect, and refers to a case of uterine prolapse as resulting from the abdominal method of breathing. Now I can quite understand that this form of breathing might bring about some of these evils in women who tight-lace but I find it hard to believe that it can be injurious to the normal woman who does not compress the waist and abdomen.

A further argument has been advanced in favour of costal breathing, whether the lower costal as advocated by Joal, or that more extended form recommended by Cathcart, in which the upper chest is well expanded, *i.e.*, that it increases the resonance of the bony thorax; and if such is the case it should go a long way to turn the balance in its favour. I am aware that theoretic considerations support this view, and that it is said to be borne out by practical experience, but I would like definite proof of this. I would suggest that some college of music should form a committee to enquire into this question. Every singer tested should be capable of singing both costally and abdominally with equal facility, and the judges should form their opinion without being permitted to see

<sup>1</sup> Joal, p. 74.      <sup>2</sup> *Ibid.*

the singer, so as to eliminate the possibility of bias. It is just possible that one mode of breathing might suit one quality of voice, and another mode of breathing a different quality of voice.

One word as to the desirability of voluntarily retracting the belly in lower costal breathing. I confess I am somewhat doubtful as to the utility of it. I think it highly doubtful whether the diaphragm plays an important part in elevating the lower ribs in this type of breathing. In my experience the ribs can be equally well raised with flaccid belly. It does not seem to me improbable that that abdominal retraction was originally advocated in order to render abdominal breathing impossible.

It will thus be seen, Mr. President and Gentlemen, that I have left the question as to which mode of breathing is best for singers undecided. I trust, however, that I have succeeded in throwing light on the different modes in which the chest may be expanded. I would suggest that every teacher of singing should obtain a complete mastery over these methods, and that the best way of doing this is to practice before a looking glass with bare chest and abdomen. I would further urge that no teacher can tell exactly how his pupil is breathing unless the thorax and abdomen are actually exposed to view. The suggestion that the pupil should actually strip before the teacher may appear primitive and indeed startling, but not the latter if the rule be observed, as it always should be, that women be taught breathing by women, and men by men.

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## THE LARYNGOLOGICAL SOCIETY OF LONDON.

*Ordinary Meeting, November 11th, 1896.*

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FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

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Dr. FELIX SEMON. *A Specimen of the Larynx of the Solan Goose and of the Cormorant.*

The interesting feature about them consisted in the fact that the larynx of both these birds is practically divided into two lateral halves by a thin triangular spur, which originates from the median line of the inner surface of what would correspond in man to the thyroid cartilage, and which touches a corresponding very considerable thickening of the middle part of the inner surface of what would correspond in man to the cricoid cartilage. The front spur is apparently membranous, almost transparent, and of a dark colour; the cricoid thickening represents a mere increase of the substance of the cartilage itself.

One of the first to draw attention to these curious formations was Alexander von Humboldt ("Observations de Zoologie," 1811, though the paper was already written in 1803). The arrangement occurs in various classes of birds; mostly, however, in diving birds. Its physiological purpose is difficult to determine; it might be hypothetically suggested

that it is intended to give greater power of resistance to the larynx in the action of diving from a considerable height (as in the solan goose) or during the act of voracious feeding on very large fishes.

Mr. Stewart, the Conservator of the Hunterian Museum, states that in the penguin the trachea is double throughout.

The President also showed two photographs sent to him by Dr. Max Scheier, of Berlin, illustrating the progress recently made in the employment of the Röntgen rays in laryngology and rhinology. One of them represents a larynx, the outlines of which can be much more clearly distinguished than in any previous skiagraphs known to the demonstrator; while in the other one a foreign body is seen in the antrum, and the frontal sinus is most clearly delineated.

Dr. CLIFFORD BEALE. *Specimen of Epithelioma of Larynx and Œsophagus following Tubercle and Syphilis.*

The patient was exhibited at the November meeting of the Society in 1893, suffering from stenosis of the larynx, the result of syphilitic laryngitis ("Proceedings," Vol. I. p. 35). Until the latter months of 1895 he had remained free from any fresh symptoms. Indefinite thickening about the larynx then began to be noticed, with some amount of dysphagia in swallowing fluids, but nothing fresh could be detected with the laryngoscope. The thickening gradually increased, and evidently involved the deeper tissues of the neck. Part of the swelling on the right side of the neck became soft and semi-fluctuating, and was incised, a large amount of caseous material being exposed and scraped away, with marked relief to the patient. The swelling on the left side increased, and breaking down on the surface, a fungating growth appeared, which was proved by the microscope to be epitheliomatous. The patient rapidly failed and died, but until the last week of his life he was able to take solid food with but little inconvenience, and could make himself heard in a hoarse whisper when the tracheotomy tube was closed. The specimen showed that the whole of the upper part of the œsophagus was converted into a cancerous ulcer, which had invaded (if it had not originated in) the larynx, and destroyed all parts of it except the epiglottis. Calcareous nodules were found in the lungs, and one of the testes was found to be scarred and fibrous.

Dr. BOND. *Case of Arrested Development in a Child.*

F. F., a child, eight years old this month, was brought to Dr. Bond on September 15th. She was only 2 feet 11 $\frac{1}{4}$  inches in height, about the size of an average child of 2 $\frac{1}{2}$  years; her weight was 32 $\frac{1}{4}$  lb.; she was pale, and the pupils large; her speech was so indistinct it could not be understood. She was brought on account of a large swelling in front of the neck, which was a greatly enlarged thyroid gland, going down to the sternum in mid-line; and at sides the gland was greatly enlarged. The thymus was not enlarged. The liver was greatly enlarged, reaching to umbilicus, and the abdominal veins were distended. The face was not unusually large; the tongue did not protrude. The child was accustomed to sit for hours without speaking; would sometimes try to speak, and then could not say what she wished. She knew her letters.

The child was born in the Old Kent Road ; was said to have had rickets when young ; she cut her first teeth at eighteen months ; and could not walk until four years old.

The child has for two months been treated with thyroid extract (thyroidin tabellæ), during which time she has grown two inches, *i.e.* a quarter of an inch a week ; has got to speak much more distinctly, and has broken out occasionally into laughter, dancing, and singing. The child's movements are altogether brisker, and her aspect brighter. The liver is markedly less, and also the swelling in neck.

The PRESIDENT asked Dr. Bond what he considered the nature of the swelling in the neck.

Dr. BOND in reply, thought it was an enlarged thyroid, and the case was one of sporadic cretinism complicated with rickets.

Dr. BOND. *Case of Sarcoma of Nose after Operation on June 12th last.*

It is now some five years since this man first had a sarcomatous growth in nose. He was shown to the Society in May last with his left nose in front filled with a fungating, vascular mass of sarcoma attached to the floor, septum, and lower part of outer wall in front.

The operation—performed at Golden Square—consisted in laying the nose open along the left side at junction with cheek, and turning it over to right side of face. The part of septum with growth on it was removed and the floor down to the bone. The site of growth was curetted, and burnt with a Paquelin's cautery. After this the nose was replaced *in situ* and fixed with stitches. The patient made a rapid recovery with trifling deformity. There is at present no sign of growth in nose.

Sections were shown.

Mr. BOWLBY remarked that the growth did not seem to be a typical sarcoma. In some respects it closely resembled epithelioma.

Dr. BOND. *Angioma of Nasal Septum. Case and Microscopical Section.*

The patient, a man of thirty, in January, 1896, came to Golden Square complaining of great epistaxis from the left nose in front. Dr. Bond found this to be due to a soft vascular polypus, springing from left side of the cartilaginous septum, and about half an inch in diameter. This was removed, but in July had recurred, and was removed again by Dr. Lack. On October 17th the patient returned, stating that for a fortnight he had had severe bleeding of the nose twice a day. The growth was removed by the cold snare, and the site curetted and then burnt with the galvano-cautery. Such cases are very uncommon, and three have been described by Dr. Natier, of Paris, under the title of "Polype saignant de la cloison."

Mr. CRESSWELL BABER. *Mucocele of the Frontal Sinus ; Radical Operation ; Recovery.*

The patient, a women of fifty-two, came to the Brighton Throat and Ear Hospital in October, 1895, suffering with severe left frontal pain, which commenced in the previous May after a severe cold.

At the age of nine she received a severe blow on the nose, and between

ten and twelve had scarlatina and measles. In July, 1895, fœtid discharge from the left nostril, and prominence of the left eyeball, were first noticed. When first seen, in October, 1895, these symptoms were well marked; and as the left antrum appeared opaque by transillumination, that cavity was punctured by Grunwald's method, but no pus was found. A portion of the enlarged left middle turbinate was subsequently removed, but without relief, and in November the left frontal sinus was opened with the trephine, and was found to contain a quantity of clear viscid mucus and cholesterine crystals. A month later mucus was still flowing from the frontal fistula, and a communication into the nose was established, working from above downwards with a drill and chisel. A drain-tube was passed through this passage. This failed to form a satisfactory outlet for the discharge, which became purulent; and in June, 1896, the radical operation for the obliteration of the frontal sinus was undertaken. The whole of the anterior bony wall of the sinus, with the exception of a ridge one-eighth of an inch in height at the lower border, was removed. The much thickened mucous membrane was cleared away, except that portion overlying a gap in the bony floor of the size of a sixpence, which had permitted bulging into the orbit, and the consequent proptosis. The skin and periosteum were stitched over the cavity, and a drain inserted. In July healing was complete, and at the present time (November) the patient is free from all frontal symptoms, a slight and not very noticeable depression remaining.

Fœtid nasal discharge is still present, due doubtless to disease of the ethmoidal cells, which probably in the first instance gave rise to the blocking of the duct, and the formation of the mucocele of the frontal sinus.

Dr. BOND thought that an operation causing less deformity might possibly have been sufficient, seeing that the case was one of mucocele.

Dr. J. B. BALL noticed that the supra-orbital nerve had been divided, producing anæsthesia of the supra-orbital region. He wished to know if this was a necessary part of the operation.

Mr. C. BABER said that in his case no communication from the frontal sinus into the nose could be made with a probe. After an opening had been drilled into the nose the discharge from the sinus became purulent, and an attempt to allow the opening in the forehead to close had to be abandoned, owing to accumulation of pus in the sinus. He did not see how division of the supra-orbital nerve could be avoided in the radical operation.

Dr. E. LAW. *Case of Hæmatoma of the Palate (?)*.

Patient consulted Dr. Edward Law on October 28th at her doctor's recommendation on account of "severe pain on the left of the mouth and throat, difficulty and pain in swallowing, swelling and tenderness behind and below angle of the jaw on the left side." Patient stated that whilst eating toast on the previous evening something suddenly broke in her mouth, and she immediately ejected a large clot of peculiar-looking blood, and afterwards nearly a cupful of bright scarlet blood and saliva. She did not cough or vomit, and before the occurrence had absolutely no,

pain, soreness, discomfort, or feeling of fulness in the mouth or throat. The tonsils had been removed seven years ago after blood-poisoning.

On examination there was seen a large evacuated sac of a blister extending over the left side of the hard and soft palate, almost pear-shaped with the broad end forwards (patient described it as the shape of a pigeon's liver), and giving the aspect of vesication after a burn. An ecchymotic appearance was caused by a number of minute red points beneath the loosened epithelium, and there was increased redness for some distance around. Epiglottis hyperæmic, other portions of mucous membrane of the oro-pharynx normal. Under pastilles of aristol and cocaine, and suitable diet, patient improved greatly.

Dr. HERBERT TILLEY. *Sarcoma of Right Tonsil.*

A man, aged seventy-two, applied to him at the London Throat Hospital complaining of thickness of speech of three weeks' duration. There was no pain. On examining the throat a large swelling was seen on the right side extending upwards into the soft palate, making it assume an almost vertical position, transversely almost to the left tonsil, and downwards as far as the finger could reach when the mouth was opened as widely as possible. It was also impossible to pass a catheter more than three inches backwards in the right nostril. A small gland could be felt externally under the angle of the right ramus. The inner surface (which was free from ulceration) gave a distinct sense of fluctuation, but on inserting a bistoury in three places for two inches of its length only free hæmorrhage occurred, and a week afterwards a foul serous discharge came from these punctures when they were pressed on.

Some members considered the swelling inflammatory, but most agreed it was a sarcoma, and Mr. Walsham thought it ought to be left alone.

Dr. H. TILLEY. *A Case of Syphilitic Laryngitis.*

A man, aged forty-five, whose case was cited at first as tubercular, but Dr. Tilley thought on further examination that it was probably syphilitic. He complained of hoarseness on admission to hospital, but difficulty of inspiration supervened, and was a marked feature of the case at the meeting. Laryngoscopic examination showed œdema of arytenoids, especially the right side. There was marked thickening of the right vocal cord and vocal process, and complete loss of mobility, the cord reaching almost to the middle line. The left vocal cord was apparently normal, but there was marked abductor paralysis.

The PRESIDENT remarked that it probably would turn out to be malignant, and thought he could make out a subglottic swelling. Tracheotomy was advised.

Dr. BEALE mentioned that he showed a precisely similar case some two years ago, viz., a case of syphilitic disease in a man with identical laryngoscopic appearances, and which eventually showed malignant degeneration, the *post-mortem* specimen of which Dr. Beale showed to the meeting.

Mr. SPENCER advised immediate tracheotomy and plucking away the growth for microscopic examination. The patient by wearing the tube would be prepared for a radical operation.

Dr. STCLAIR THOMSON. *Dropping of Cerebro-Spinal Fluid from One Side of the Nose.*

The patient was a single woman, aged twenty-three. Two and a half years ago she gradually became aware of an increasing tendency to drip from the left nostril. This would occasionally stop for a week or a month at a time, but since Christmas, 1895, it has been continuous day and night. As a rule the fluid runs forwards, causing her to continually hold a handkerchief in her hand to prevent it from dropping from her nose. If her head is inclined backwards the liquid runs into the back of her throat, and she swallows it. By inclining her head forwards about half a drachm was collected in five minutes, which was shown to the Society. It was seen to be perfectly clean, like water, and free from odour. On two occasions it had been analyzed by Dr. Hewlett, the pathologist of the Throat Hospital, and his conclusions were that in its reactions it resembles cerebro-spinal fluid rather than nasal mucus.

The patient had been subject to headaches ever since childhood; these were always relieved when the dripping of fluid set in, and since the flow had become continuous they have been only slight and occasional. The examination of the nasal and accessory cavities was negative. Her sense of smell is unaffected, and the fluid is free from disagreeable taste or odour. There is no history of accident, nor of fits at any time, and she has otherwise been considered healthy. She only applies now for advice because of the discomfort of the continued running from her nose.

Referring to previous publications of somewhat similar conditions, Dr. Thomson was inclined to think that many of them had really been cases of escape of cerebro-spinal fluid, *via* the nose, and had been wrongly attributed to local nasal conditions. In most of them, as in this case, brain symptoms were present, and there appeared to be a distinct connection between the headaches or other cerebral symptoms and the cessation of the flow of fluid. Another noteworthy point was that in a large number of similar conditions, atrophy of the optic disc was present. In the present case there was neither optic atrophy nor optic neuritis, and the examination of the eyes showed them to be quite normal. This interesting case had occurred at the Throat Hospital, in the clinic of Dr. Bond, to whom Dr. Thomson wished to express his indebtedness for kindly permitting him to investigate and exhibit it.

Dr. WILLCOCKS. *Multiple Papillomata of Larynx.*

Charles L., aged eight years, was admitted into the Evelina Hospital on May 19th, 1896, suffering from considerable dyspnoea and aphonia; scattered patches of broncho-pneumonia in the lungs, with marked indrawing of the lower ribs, were present. Numerous papillomata in the larynx were detected. These are chiefly situated on the cords and on the inter-arytenoid space. They are small, senile bodies, distinctly mammillated, and varying in size from a pin's head to a split pea. No attempt at removal was made while the boy was in the Evelina Hospital, beyond palliative inhalations and treatment of the broncho-pneumonia.

The boy was transferred to Charing Cross Hospital in July, and after consultation with the anæsthetists, Dr. Hewitt and Mr. Gardner, it was

decided that an attempt should be made at removal of the growths *per vias naturales*, under chloroform.

Many of the papillomata were removed with Mackenzie's forceps at various times. The curette and forcible brushing were also employed to a slight extent. The boy had no unpleasant symptoms on any occasion after the operations, and his breathing has been considerably improved, but his voice has never properly returned.

Within the last month the growths have commenced to recur, without, however, producing any serious dyspnœa. The voice is hardly audible, and reduced to a whisper.

The case is shown to the Society with a view of eliciting from members their opinions and advice as to the best plan of treatment to be adopted for the future.

(1) Should the growths be removed after thyrotomy?

(2) Should a preliminary tracheotomy be performed and the papillomata removed as before by the mouth, or allowed to atrophy?

(3) Should the plan already adopted be continued—the growths to be removed under chloroform, by forceps, etc., as occasion demands?

Mr. BELLAMY GARDNER, who gave the anæsthetic, said that he was much assisted by using Hewitt's gag.

The PRESIDENT would not advise thyrotomy in these cases, as it does not prevent recurrence.

Dr. BOND saw no reason why anæsthesia should be again required in treating this case. In even younger children by the use of a tongue depressor put far back, or by using the left forefinger as a guide, it was without training easy to remove masses of these growths. In tiny children he advocated tracheotomy, the removal of all post-nasal growths and not much meddling. In older children careful training, and the removal under cocaine of all growths seen with the mirror, was to be recommended.

Mr. SPENCER would agree that tracheotomy should be done when necessary, and the papillomata removed; the cricoid ring might have to be divided, but certainly not the thyroid.

Mr. W. G. SPENCER. *Two Cases of Laryngeal Cancer: (1) Spheroidal-Celled Carcinoma of the Vocal Cord; (2) Perichondral Sarcoma of the Cricoid Cartilage.*

These two cases of malignant disease, otherwise widely differing, had one condition in common—the mucous membrane in both was intact, and therefore there was an absence of those symptoms which are caused by ulceration.

Case 1. *Spheroidal-Celled Carcinoma of the Vocal Cord.*—Ten weeks previous to the removal of the growth, the patient, a healthy man aged seventy, came complaining of hoarseness, which he had noticed for the first time three months before. The growth must, therefore, have existed for at least six months before the operation. I found that the left vocal cord was partly fixed, adduction was completely absent, but there was still some abduction in deep inspiration. The cord itself was clearly visible, and slightly red. I could detect nothing else abnormal neither in

the larynx nor in the chest. He had had one attack of gonorrhœa forty years before, but nothing more.

Iodide of potassium and mercury were given for six weeks, but in the meantime the disease slowly advanced. The vocal cord became absolutely fixed in abduction, and its outline and colour indistinguishable from the neighbouring mucous membrane. A swelling formed in it, which extended forwards to the middle line, whilst the epiglottis was drawn a little backwards on that side, so that a complete view could only be obtained during deep inspiration. The hoarseness increased, but no fresh symptoms of any kind appeared. No glandular enlargement could at any time be detected. The patient was kindly seen by Dr. de Havilland Hall, and by Dr. Semon, who concurred with my diagnosis of cancer, and the tumour was excised. Upon thyrotomy and retraction of the alæ, the tumour was seen occupying the position of the left vocal cord. It was the size of a horse-bean, hard to the touch, partly attached to the cartilage, and its covering like the mucous membrane around it. It reached to the middle line in front, but not quite back to the arytenoid cartilage. The growth was removed by a wide incision which included the ventricular band, the ventricle, part of the arytenoid cartilage, and the anterior third of the opposite vocal cord. It had to be separated from the cartilage by a raspatory, after which the exposed cartilage was well rubbed with pure carbolic acid. Recovery took place without incident, leaving the patient with a good hoarse voice. The material removed is exhibited, and it can be seen that there has been no ulceration. A microscopic section made by Dr. Hebb from the deeper part of the tumour shows clumps of small spheroidal epithelial cells, infiltrated by leucocytes, and surrounded by dense fibrous tissue. The growth may be compared with the slow-growing carcinomata of the skin, in some of which a tumour forms in the deep layers of the skin previous to any ulceration.

Case 2. *Perichondral Sarcoma of the Cricoid Cartilage.*—A single woman, aged forty-three, was admitted under Dr. de Havilland Hall for dyspnœa, seven weeks before the excision. She had been well until two months previously, so that there is evidence of the existence of the disease for four months before its removal. She had worked as a paper colourer in hot air and steam, and had had many attacks of tonsillitis. Dr. Hall found that the dyspnœa was due to subglottic obstruction, thickened masses projecting below the vocal cords without impairing the action of the larynx, which was unaltered. There was no swelling to be made out in the neck. The dyspnœa got slowly worse, so that a month after admission she was partly cyanosed and was unable to lie down and sleep. Dr. Hall and I then agreed that tracheotomy had become necessary, which I forthwith did. As soon as we could we again thoroughly examined her, and found the lumen of the tube just below the glottis blocked by bulging mucous membrane, growing especially on the right side; and in the neck, on the right side, large glands could now be felt. I thereupon enlarged the tracheotomy wound, and inspected the disease directly. The interior of the cricoid ring was occupied by a new growth covered by mucous membrane of normal appearance and free from all ulceration. Whilst the head was hanging down I plucked away the projecting mass with punch forceps until the interior of the ring was

clear. The patient was sent back to bed breathing freely through the larynx without a trachea tube. Dr. Hebb examined the pieces plucked away, and reported that they all consisted of sarcomatous new growth, and this diagnosis was confirmed by the rapid enlargement of the glands in the neck, and by the refilling of the cricoid ring with growth.

The larynx, the upper two rings of the trachea, and the enlarged glands were therefore removed through the one incision. No trachea tube was employed. The glands on the right side, five in number, the largest one inch and a half in diameter, were closely adherent to the internal jugular vein for the length of two inches, from which they were separated without wounding it. The trachea was cut across below the tracheotomy wound, to which the growth seemed to have extended. The lower end of the pharynx behind the cricoid was free from the growth except a piece on the right. The wound was sewn up by stages, and has healed; the neck is quite soft and free from all enlarged glands; the patient can swallow well, and speaks in a good whisper. The only complication was a leakage through the upper end of the wound close to the hyoid bone, which formed when the stitches were taken out, but this has now practically closed. The patient's work in hot steam, and the repeated attacks of tonsillitis, were in favour of the diagnosis of subglottic inflammation; on the other hand, the larynx was not affected. When we saw that the disease was not an inflammatory one, we thought that it might be an infiltrating thyroid adenoma; and on that hypothesis, combined with the wish for a microscopical examination, the masses filling up the cricoid ring were plucked away. The larynx is exhibited as removed, except that the infiltrated glands and extrinsic muscles have been cleared off. The interior of the cricoid cartilage is partly filled by new growth, which is now ulcerated on the surface owing to the original growth having been plucked away shortly before. The posterior surface of the arytenoidei postici looks normal; the growth had not extended through them to the pharynx, nor paralyzed the vocal cords by infiltrating the recurrent nerves. A microscopic section is also shown. The original growth and the glands removed all consist of the same material—round-celled sarcoma. It is plain that the disease originated beneath the mucous membrane lining the interior of the cricoid cartilage, and that excision of the larynx was the only possible treatment. The growth was evidently of a malignant type, and recurrence may be thought likely in spite of the wide removal of the disease and of the enlarged glands; yet there is perhaps more uncertainty about the prognosis in sarcoma than in carcinoma, which may afford some prospect of cure.

The PRESIDENT hoped Mr. Spencer would let the Society see the patients again. He thought both rare cases.

Mr. BOWLBY suggested that the specimens should be referred to the Morbid Growths Committee.

Mr. E. C. STABB. *Laryngeal Case for Diagnosis. Query—Bilateral Malignant Disease.*

Female, aged fifty-six, married; large family of healthy children. No family history of malignant disease or phthisis. No history or evidence of syphilis. Loss of voice gradually increasing for twelve months, and

slight difficulty of breathing for six months. No pain. On laryngoscopic examination six weeks ago, when she first came under observation at St. Thomas's Hospital, both ventricular bands were much swollen, and nearly touching in the mid-line. The surface was red and swollen, giving the appearance of bilateral malignant infiltration. No ulceration. True cords not seen, being hidden by the swellings above. Right side of larynx almost completely fixed; left side moved slightly on attempted phonation. No glandular enlargement to be detected. Chest normal.

Patient has been treated with increasing doses of iodide of potassium (up to gr. 30 t. d. s. during the last fortnight), but the condition has not altered perceptibly till to-day, when ulceration is present upon the mesial surface of each mass replacing the ventricular band.

Dr. W. HILL had a case of adeno-fibroma of larynx in an old gentleman that looked exactly like this one.

Mr. BOWLBY thought it was a case of malignant disease.

Dr. BALL. *Ulceration of the Mouth of Doubtful Origin.*

S. M—, aged twenty-five, a sister of charity. She came under observation on July 21st, complaining of soreness of the mouth which had existed for eleven months. At the back part of the inner aspect of each cheek was an eroded patch, about three-quarters of an inch to an inch in diameter, with a reddish surface and an irregular, sinuous edge, formed by a thin line of detached macerated epithelium. The history was that the soreness began first on the right side, and about two months later the left side became sore. At times the places felt very sore, and it hurt her a good deal in eating. This generally lasted a week or so, and then they would feel better for a week or two. During the three or four months she has been under observation the patches have varied a little in size, being sometimes a little larger, sometimes a little smaller; otherwise there has been no change. Mouth-washes of borax, chlorate of potash, and boracic acid have been used, and the patches have been painted with chromic acid solution (10 grains to the ounce), and touched with nitrate of silver. Some affection of a herpetic or pemphigoid nature has been suggested. Nothing, however, of the nature of vesicles or bullæ have been observed. It is intended to try internal administration of arsenic. The patient's tongue exhibits, in a well-marked form, the ordinary features of the so-called geographical tongue. This condition of the tongue appears from the history to have existed since childhood.

The PRESIDENT had shown a similar case at the Clinical Society, when no definite diagnosis was given.

Mr. SPENCER suggested the possibility of slight scurvy from low diet.

Dr. JOBSON HORNE. *Disease of the Tonsil, Soft Palate, Pharynx and Larynx on the Left Side, Syphilitic in Appearance, occurring in the Course of Pulmonary Tuberculosis.*

The patient, a married woman, aged twenty-eight, had suffered for four or five months with throat symptoms. The left tonsil was eaten out by a process that was still active, and attacking adjacent structures. There

was paresis of the left half of the soft palate, which was intensely inflamed. Ulceration was spreading upwards and downwards on the posterior wall of the pharynx. The left half of the larynx was infiltrated and the cord fixed. A purulent secretion trickled from the posterior nares, the right was completely obstructed (polypus), and the left partially so.

The points in the woman's history material to her case were these. She came from a tubercular stock—she was herself tuberculous—and she had bred a child that had died from tuberculosis. The thorax yielded signs of active tuberculosis in the right upper lobe. She had been married eleven years, and had had two children. Eighteen months since she had a miscarriage, and since then her hair had been falling out. During the past two years there had been nearly a constant cough, occasionally slight hæmoptyses, and the general health had deteriorated.

To say that the tonsillar condition was due to syphilis, Dr. Horne considered was not open to an absolute denial, but he thought that tuberculosis was mainly responsible for the laryngeal lesion. He showed the case in the hope that the diagnosis would be better defined before treatment was initiated.

Dr. CLIFFORD BEALE thought that it was of a tubercular nature.

Dr. DUNDAS GRANT. *A Case of Malignant Disease of the Thyroid Gland.*

The patient was a lady aged fifty-seven, who for about two months had suffered from fulness of the throat and embarrassment in breathing, on exertion paroxysms of coughing, and for four weeks huskiness of voice. There was an intensely dense enlargement of the thyroid gland, especially the right lobe, which, although it moved slightly in swallowing, did so in considerably less degree than the larynx. Behind each external mastoid there was an enlarged gland. The larynx was displaced considerably to the left.

Laryngoscopic examination showed both vocal cords to be normal in appearance and in movement, and the absence of any definite plugging of the walls of the trachea.

She had been under the exhibitor's observation about four weeks, during which time she had taken iodide of potassium, and applied Leiter's cold coil to the swelling. She thought she was slightly relieved by the use of the cold coil, but in reality there was no diminution in the size of the gland.

She had developed a very slight degree of tracheal stridor, and the enlargement of the lymphatic glands has become more marked, thus confirming the original diagnosis.

Mr. BOWLBY had seen two cases like this. There was no doubt about the diagnosis. He considered an operation impossible.

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## Obituary.

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### EUGEN BAUMAIN.

EUGEN BAUMAIN died in his fiftieth year. He was Professor of Physiological Chemistry at the University of Freiburg (Baden). General medicine owes to him the discovery of the widely employed hypnotics sulfonal and trional, and the effectual anodyne phenacetin. But also our speciality will honour his name for a discovery made by him in the last year of his life. Baumain showed that we had not yet known all the elements in the human body. He has proved iodine, in the form of hyro-iodine, is as necessary in the thyroid gland as iron in the blood. This development is equally important for pathology as well as for physiology; also for treating the diseases caused by abnormalities of the thyroid gland, myxœdema, cretinism, and Basedow's disease. His name will be joined with the history of medicine for ever. *Michael.*

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### GEORG RICHARD LEWIN.

A sudden death terminated the life of one of the pioneers of our science. GEORG LEWIN died of apoplexy on the 1st November, 1896. It was the end of a life full of labour. Many branches of medical science have been enriched through his great skill and energy. Born 1820, in Sondershausen, he graduated in 1841 as a physician in Berlin. In the first years of his practice he published valuable work on forensic medicine. In 1863 he was elected as successor of Bacrensprung in dermatological and syphilodological clinic, and held this clinic until 1884, when he resigned the dermatology. On this occasion he was honoured with the title Geheimrath. Only a short time before his death he resigned this also, but he did not long enjoy his "otium cum dignitate." His numerous publications on syphilis and skin diseases we will not mention here, for neither toxicologie nor syphilitic publications would grant him a place in the history of laryngology. But he was one of the first who studied laryngology—the same year as Victor von Bruns—he attempted intra-laryngeal operations for neoplasms. He improved the illuminating apparatus by application of lenses. His standard work is "Inhalations Therapy," the first volume of the "Klinik der Kehlkopfkrankheiten" (Berlin, 1865). It is to be regretted that pressure of other work did not allow the author to continue this. This one volume contains numerous new observations, which prove so careful a treatment of the subject that it will be for ever a fountain of learning for specialists. We find here the description of atrophy of the lingual tonsil in cases of syphilis, the relation of nervous disturbances caused by hypertrophy and varices of the lingual tonsil, which for long years remained unnoticed, and only in the last time have found their well-merited confirmation and acceptance by new observers, and by himself and Heller in his last publication in 1895 on this remarkable post-syphilitical symptom. *Michael.*

# THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

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## A CONTRIBUTION TO THE PATHOLOGICAL ANATOMY OF ETHMOID DISEASE.<sup>1</sup>

By JOHN NOLAND MACKENZIE, M.D. (Baltimore),

Clinical Professor of Laryngology in the Johns Hopkins Medical School, and Laryngologist to the Johns Hopkins Hospital; Clinical Professor of Diseases of the Throat and Nose in the University of Maryland.

THE poverty of our exact knowledge concerning the finer histological changes that take place in the ethmoid region during disease of that structure induces me to bring before you the microscopic appearances observed in several cases (which I select from a number of similar ones), which may be considered as representative of a certain type or class of inflammation of the ethmoid cells sufficiently commonly met with in practice.

Out of the series I take the following case, the narrative of which may be briefly told :—

It is the simple story of a unilateral purulent or muco-purulent nasal discharge, sometimes scanty in amount, sometimes very profuse, extending over a period of nearly eighteen years, in a young unmarried woman of twenty-nine, in other respects in apparently good health. The origin of the disease is obscure; but in all probability it is the legacy of a neglected intranasal inflammation, possibly an acute or subacute endorhinitis.<sup>2</sup> The discharge, which has always been free from odour, and which, under the microscope, is destitute of organisms other than the ordinary pus-producers, varies greatly in amount at different times. Sometimes absent, it is at others very great in amount and accumulates

<sup>1</sup> Abstract of remarks made before the American Laryngological Association at its Eighteenth Annual Congress.

<sup>2</sup> The term "rhinitis," employed as descriptive of inflammation of the lining membrane of the nasal passages, is a misnomer and its use illogical. The term "endorhinitis" is much more logical, more exactly descriptive of existing conditions, is not too abrupt a change from the old nomenclature, and is sufficiently short to warrant the transition from the old to the new.

with marked rapidity, and is associated with extensive crust formation. A notable feature is its very pronounced increase during menstrual excitement (menses), at which time the other symptoms are notably intensified.<sup>1</sup>

The discharge is associated with supraorbital neuralgia of the corresponding (right) side of the head, and other pains variously referred to the back of the head, neck, and even as low down as the shoulder-blade. There was no tenderness externally on pressure.

The above symptoms had begun to affect her general health, and had produced a condition of nervous excitability which had interfered greatly with her social duties as a leader of fashionable society.



FIG. 1.

She came to Baltimore in the latter part of November, 1895. Just prior to that time she had undergone an operation (curettement) of the uterus for relief of endometrial inflammation, the result of careless exposure at the menstrual epoch. At her first visit an ocular examination of the interior of the nose revealed nothing worthy of special notice, except a moderate thickening of the anterior end of the middle turbinated body.

Between it and the external wall was a very thin line of purulent discharge. A delicate silver probe passed with some difficulty between the turbinated body and the external wall, impinged high up upon a

<sup>1</sup> See on this subject the paper by the author on "Irritation of the Sexual Apparatus as an Etiological Factor in the Production of Nasal Disease." "*Amer. Journ. Med. Sciences*," April, 1884.

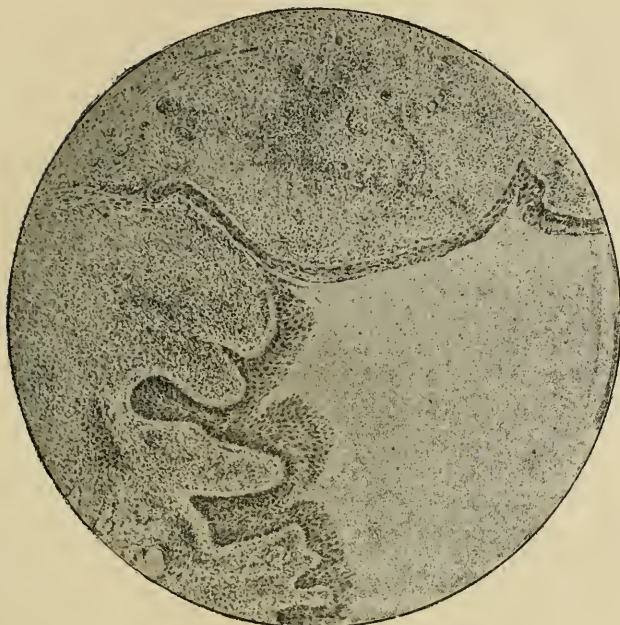


FIG. 2.



FIG. 3.

rough, uneven surface, and its passage was followed by some bleeding and increase in the discharge. The whole turbinated ethmoid region was exquisitely sensitive to the touch. As it was impossible, both from the narrowness of the passage and the great hyperæsthesia (even under cocaine), to introduce even the smallest curette, I removed (with the cold-wire snare) the anterior end of the middle turbinated body as a preliminary step to opening the ethmoid cells. The operation was followed by considerable hæmorrhage and profuse purulent discharge. On the following and subsequent days I removed the diseased structures with Grünwald's cutting forceps and curettes.

In order to illustrate the pathological changes that take place in this particular grade of inflammation of the ethmoid region I have had the accompanying drawings made. They were taken from sections of portions of the turbinated and ethmoid cells removed with the forceps and snare. The sections were carefully prepared by Prof. Simon Flexner, of the Johns Hopkins University, and it is from his report of the microscopical examinations that I shall quote.

Fig. 1. *Section through the mucous membrane of ethmoid.* (?) The whole represents a hypertrophied mucous membrane in which a few glands only are preserved. The new tissue is highly vascularized, resembles young granulation tissue, contains small accumulations of leucocytes, and is covered by a layer of laminated epithelium, the superficial cells of which are columnar, ciliated in character. The new tissue can be traced inward as far as the bone, a small section of which is included in the drawing. The preserved glands are atrophied, separated by an intervening new growth of tissue, and are rapidly undergoing obliteration. The resemblance of the new tissue to sarcoma is at first suggestive. The differences are—(1) the collections of small inflammatory cells in the mass of young tissue; (2) the slight tendency to invade the deeper structures; (3) the presence in other parts of the specimen of definite adult connective tissue of which this granulation tissue is probably an early stage; (4) the clinical history, which is not at all suggestive of malignant tumour.

Fig. 2. *Hypertrophied mucous membrane of ethmoid.* (?) The tissue constituting the hypertrophy is composed of small round and spindle cells, and apparently is a granulation tissue. Among these cells a considerable number of polymorpho-nuclear leucocytes are scattered. Between the cells a basement substance, for the most part granular, but in part fibrillated, is present. Definite adult fibrous tissue does not occur in this part of the section. The surface epithelium shows the most interesting changes. It is of a laminated character, the superficial cells being high (columnar) and ciliated. The normal epithelial layer is found to become thickened and thrown into folds resembling the normal inter-papillary processes, and to grow downward into the new tissue in an atypical manner. Normal glandlike structures are entirely wanting in this new tissue.

This growth of epithelium is atypical in character, not malignant, and distinct from epithelioma. Similar atypical growths are found in the base of old leg ulcers, healing chronic ulcerations of the intestines, etc.

Fig. 3 shows the glands of the ethmoidal mucous membrane being separated by a new growth of tissue, which also is invading the gland lamina. The glands to the right are quite normal, while those to the left are more or less altered, especially the one in the lower left-hand corner of the drawing. The last shows an ingrowth of spindle-shaped elements and small round cells, and among those a few polymorpho-nuclear leucocytes. In the extreme lower left-hand corner of the finely fibrillated tissue is a false membrane composed of hyaline fibrin with a few pus cells, and dates from an operation some days previous to the removal of the tissue from which this was taken. The pseudo-membrane mentioned apparently was produced by a direct transformation of the cells of the tissue into this fibrinous material. Very few emigrated cells seem to have participated in the process.

The chief lessons to be learned from the foregoing study are :—

1. That the so-called "myxomatous degeneration" described by writers on ethmoid disease is not due to mucous change at all, but is the result of simple inflammatory action.

2. That authors have fallen into this error because they have approached the subject solely on its clinical side and without the aid of the microscope.

3. That purulent ethmoiditis may in many cases endure for years without producing any bone lesion whatever, and that therefore the proposition that all ethmoiditis tends toward and usually develops into necrosis has no foundation in actual pathological fact.

4. That the changes found represent successive stages of the same affection, and that therefore divisions and subdivisions of "ethmoiditis" tend to introduce an element of confusion into our pathological conception of the disease.

5. That the ethmoid region affords probably the most excellent place for the study of the origin of so-called nasal polypi.

6. Finally, of great importance is the striking similarity between the young granulation tissue found in the ethmoid region and the structure of round-cell sarcoma, and hence the possibility of error in microscopic diagnosis in early and even in more or less advanced cases.

Let us consider these propositions in detail :—

1. It is high time to clarify our ideas in regard to the frequent existence of myxomatous tissue within the nasal passages. The term "myxoma," as applied to neoplasms in these cavities, has long been used in a loose and misleading manner. Myxoma is the embryonal tissue from which fat is originally formed, and is therefore homologous with lipomatous tissue. Hence we should naturally expect to find it in situations where adipose tissue most abounds, and this is, as is well known, clinically the case. If, then, we understand by "myxoma" a structure histologically similar to that of the vitreous humour and foetal cord, then the nasal passages would be among the last places in the body in which we would look for mucous tissue. The growth commonly found in the nasal passages is not a true mucous structure, but an œdematous fibroma which is usually inflammatory in origin. We may find areas of tissue resembling myxoma in growths removed from the nose ; but in regard to the frequency with which true mucous tumours are found in this region, I am at one

with Jonathan Wright,<sup>1</sup> when he declares that such is not "the usual character of the growth we know clinically as gelatinous nasal polypus."

The same is true of the diseased tissue removed from the ethmoid region. Here the closest scrutiny fails to detect the presence of myxomatous tissue (*see* plates). Our nomenclature would, therefore, be more exact if we discarded entirely the term "myxomatous" and "gelatinous" in our classification of intranasal neoplasms.

II. The gross microscopic appearance of the tissue removed from the ethmoid and middle turbinated cells resembles quite often the structure which we have heretofore looked upon as myxoma; but I have yet failed to find on microscopic examination any trace of true mucous tissue.

III. The most radical view of this subject that I have met with is the assertion of Bosworth,<sup>2</sup> who, speaking of the "early occurrence of necrosis and exfoliation of bone," makes the statement that "the tendency in all cases, and the result in the large majority of instances of a suppurative inflammation of the ethmoid cells, is necrosis of bone," and that "all ethmoiditis tends toward, and usually develops sooner or later into, necrosis." In the light of my own experience, it is extravagance of statement to aver that there is an inherent tendency in all cases of ethmoiditis toward necrosis or even caries. Leaving out cases due to specific (syphilis, tuberculosis, etc.), chemical (mercury, phosphorus, etc.), or traumatic causes, it is not the rule to find necrosis or even caries of bone. I have never met with them except as accidental or incidental phenomena. Suppuration may go on for years without involvement of the denser structures. That bone lesions should be found in cases in which the pus can find no exit, or in which the blood-vessels have been so changed by the infective process that loss of substance in the soft and bony parts has occurred, is not in the least degree to be wondered at. But that there is any inherent power in simple or even suppurative inflammation of the lining membrane of the ethmoid cells to produce caries or necrosis of bone is highly improbable and not in accordance with clinical fact. Such tendency is not found elsewhere in this portion of the respiratory tract, and the ethmoid region should therefore furnish no exception to the rule. The simple truth is that when the inflammatory process reaches the bone, changes may take place in these structures similar to those found in the stage of atrophic endorhinitis, viz., absorption and disappearance.

In a large number of turbinated bones removed by Grünwald<sup>3</sup> only a few showed signs of secondary caries, and in these the bone lesion was not primary, but secondary, and due to a long-continued irritation of pus, not from the situation of the ulcer, but from elsewhere—more in the nature of a decubital ulcer.

IV. We unnecessarily complicate matters by describing as different varieties the different stages of one and the same disease. In the case before us, as can readily be seen from the above, we are dealing with a

<sup>1</sup> "Transactions of the American Laryngological Association," 1893, p. 80.

<sup>2</sup> "Diseases of the Nose and Throat," New York, 1889, Vol. I., p. 482.

<sup>3</sup> "Die Lehre von den Nasenerkrankungen," München, 1896, p. 31.

chronic inflammatory process which in many respects follows the fortunes of inflammation in the lower nasal passages and shares a similar fate.

V. An examination of the diseased tissues from the ethmoid and middle turbinated regions in the cases submitted to the microscope would seem to indicate that, in this particular situation at least, the ordinary nasal polypus is developed as follows:—The *first stage* consists in the formation of young granulation tissue, the result of inflammatory action. In the *second stage* this tissue becomes gradually converted into definite adult connective tissue, which in the *third stage* gradually separates and causes more or less complete obliteration of the normal structures, and in the *fourth stage* converts them into a fibrous mass. In this condition the growth is extruded from, let us say, the ethmoid cells, by the *vis à tergo* of the hyperplastic changes within its interior, into situations where, acted upon by the force of gravity, it becomes œdematous, and assumes the form and position characteristic of these growths in obedience to the operation of that natural law.

The conditions under which the conversion of young granulation into adult connective tissue takes place are as yet imperfectly understood. That such conversion does not always occur is evident from the presence of masses of granulation tissue in the form of definite tumours, notably in the region of the hiatus semilunaris, in cases of sinus inflammation. Possibly, therefore, the granulomata found in this situation may represent the original granulation tissue which has not undergone fibrous change.

I cannot go as far as Grünwald<sup>1</sup> in ascribing the genesis of nasal polypi to suppuration. They are undoubtedly in the vast majority of cases (to say the least) the product of inflammation. The presence of suppuration, frequent though it may be, is simply an accidental, or, to speak more accurately, an incidental, phenomenon, and is therefore of secondary importance.

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## SOCIETIES' MEETINGS.

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### THE LARYNGOLOGICAL SOCIETY OF LONDON.

*Ordinary Meeting, December 9th, 1896.*

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FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

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*Specimen of Fatty Tumour from Epiglottis.* Shown by Dr. P. MCBRIDE.

M. W., aged forty-one, was first seen in July, 1887. About six months before the patient found that he made a peculiar sound in breathing. Eventually this symptom became troublesome when he lay down, and finally he began to have some difficulty in swallowing; there was no

<sup>1</sup> *Loc. cit.*, p. 80.

pain, but deglutition required a distinct effort, and was accompanied by an audible sound.

On examining the throat, a pale pink rounded tumour was seen behind the tongue. The laryngoscope and probe showed that it was attached to the epiglottis. A Jarvis snare with a bent shaft was passed over the mass and tightened. It was found that the cold wire could not be made to cut through the growth, so that the part seized had eventually to be cut off with scissors; the remainder of the tumour was removed by means of the galvano-caustic snare, adjusted by the aid of the laryngoscope. The first portion of the growth removed was handed over to Dr. Alexander Bruce, who described it as a fibro-lipoma. The stump which was left had a broad attachment to the right vallecule. At first the sloughing resulting from the electric cautery produced a bad taste in the mouth. These symptoms soon yielded to the use of a boracic gargle. On the 26th December, 1887, the condition of parts was as follows:—"Only a rounded fulness filling up right vallecule and evidently attached to the epiglottis and adjacent part of the tongue." On the 3rd December, 1888, the patient was again brought, and the tumour had not only recurred, but reached a size equal to that it had attained when first seen. The second recurrence was removed by means of the galvano-caustic snare while traction was made on the tumour with forceps; this had the effect of enucleating the mass ("Transactions of Edinburgh Med.-Chir. Soc.," 1888).

After this immunity was enjoyed for eight years, subsequent to which uneasy breathing and choky feelings seemed to have been noticed. Six or eight months ago he began to have a difficulty in swallowing, and the food occasionally returned into the mouth. He stated that he never had any real dyspnoea, even on exertion. On depressing the tongue, a rounded mass with a yellowish appearance in parts was seen; the bulk of the growth, however, was pinkish, and a good many dilated vessels crossed it. When touched by the finger, the tumour felt firm and elastic; with the mirror, a large rounded growth was seen completely obscuring the larynx. On the 25th October the electric cautery snare was passed over it, while traction was made by means of a vulsellum, and, as a result, this specimen was removed. The wire has only cut through the capsule, while the deeper portion of the tumour has evidently been enucleated by traction. Dr. McBride believes that traction should always be exercised in these fatty tumours while the capsule is being cut through.

*Photographs of a Case of Rapid Destruction of the Nose and Face.*  
Shown by Dr. P. McBRIDE.

A. P., aged twenty-eight, house painter. History of gonorrhoea three years before, but no evidence of syphilis. He never had anything to do with horses. In December, 1895, he scratched his nose on the inside of left ala with his finger. This became itchy and sore; in a week the skin began to swell. During January matters remained the same, only the left side of the nose and corresponding cheek were swollen and painful, and there was some discharge from the nostril. He was examined in the beginning of January, 1896, when an ulcer was seen on the inner side of the left ala about as large as a sixpence, covered by a dirty white slough;

some of this was removed and examined for tubercle bacilli with a negative result. Syphilis then suggested itself, and the patient was put on iodide and boracic syringing. He, however, returned on the 6th March, worse rather than better, and was admitted to the wards.

The case then presented the following features, viz.: erysipelatous-looking swelling of the left ala, cheek, and lower eyelid, a pustule beginning to form on the exterior of the left ala, much pus partly inspissated within the nostril, and bare bone in the middle turbinated region. Gradually the pustule changed into a fistula, and from this onward gradual destruction of the surrounding parts followed. On the 5th April Dr. Semon saw the patient, and suggested the possibility of the case being one of primary syphilis. Mercurial inunctions were then tried without effect.

Dr. Milligan also saw the case, and kindly made an inoculation, but the result as regards tubercle was negative: indeed, the guinea-pig when killed five weeks after presented no evidence of disease. After this, destructive and caustic agents were used, with the hope of destroying what seemed to be a virulent and rapidly destructive organism. Thus, acid nitrate of mercury, potassa fusa, Paquelin's cautery, and removal of the diseased edges with a knife were tried. Mercurial inunctions were again employed, but without effect. The progress of the case was characterized by great rises of temperature (of a septicæmic type) associated with marked œdema of the face and eyelids, which at first lasted a few days and then disappeared. Latterly, however, the temperature was more constantly up, but still showed marked fluctuations. In July, Dr. Unna, of Hamburg, kindly saw the patient. Both of his suggestions had already been considered, viz.: malignant tertiary syphilis and glanders. On his recommendation iodide and quinine were given, and peroxide of hydrogen was used locally. At this time two tubes of agar were kindly inoculated by Dr. Fortune, and cultivation experiments carried out. The patient had a hydrocele, and from this the fluid was drawn off. Guinea-pigs were inoculated both with the hydrocele fluid and with secretion from the ulcer. Several hæmorrhages had meanwhile occurred from the ulcerated surface, and one necessitated plugging. The cultivations gave no definite results as far as they were carried; that is to say, there were no glanders organisms, but numerous cocci and bacilli. The guinea-pigs died: one (that inoculated with hydrocele fluid) in a few days, and the other in a month. Neither presented any evidence of orchitis—the characteristic change produced in these animals by glanders. The destructive ulceration continued, and the patient died on the 18th September.

*Post-mortem* revealed nothing, as the organs, excepting the heart and right testicle, which were atrophic, were normal. The destruction of the face was very extensive, the bone being exposed from malar to malar ( $3\frac{1}{2}$  inches), while the whole external nose and most of the upper lip were destroyed.

Sections taken from margins of the ulcer were kindly examined by some pathological friends; owing to the presence of marked endoarteritis, some were of opinion that the microscope, at least, pointed to

tertiary syphilis. Against the view of syphilis there is an absence of definite history and corroborative evidence. On the other hand, French writers have described as "destructive farcy of the face," a variety of glanders having similar results, but all the facts of the case point to the absence of this disease. Dr. Muir, pathologist to the Royal Infirmary, has been good enough to examine sections, and is strongly of opinion that the disease does not correspond to any type with which we are familiar.

Dr. SEMON said he had seen the case in Edinburgh. Might it be caused by a phagedænic chancre?

Mr. SPENCER suggested that the condition was akin to the noma of children, and similar to the cases described by Sir James Paget as "carbuncle of the lip," occurring in adults. A primary phagedænic syphilitic sore seems to be excluded by the absence of enlarged glands.

Dr. BRONNER said he had seen a somewhat similar condition attack the eyelids of children.

Dr. W. HILL asked if the patient lived long enough to develop secondary symptoms, on the assumption that the case might have been, as suggested, a primary syphilitic phagedæna of a very malignant type, which would be unlikely to be influenced by mercurial treatment.

Dr. MCBRIDE, in reply, stated that noma and syphilis had been thoroughly considered, and negatived.

*Case of Foreign Body in Nose.* Shown by Dr. P. MCBRIDE.

Miss M., aged thirty-two, came on December 4th complaining of a discomfort in the right nostril. There was no pain, but she felt as if something were moving. On examining the nostril, a whitish-brown mass was seen with a sharp edge, and on touching this with a probe it was felt to be hard. By means of a blunt hook it was pulled forward, but was too large to permit of its removal; with forceps some pieces were broken off, and then the main mass was extracted, measuring roughly  $1\frac{1}{2}$  by 1 by 1 inches. Patient had complained of feeling something in that side of the nose for ten years. Even previously, however, there had been some discomfort; there was also a history at eleven years of age of nasal discharge with smell, and she had all her life had a bad breath. After the substance was removed there was no ulceration and no evident loss of substance or cicatrization. The mass was slightly fœtid, but the remarkable feature of the case was the absence of all purulent secretion. The substance, as you can see, is a rhinolith, but whether the nucleus be a foreign body or a piece of dead bone cannot of course be said.

*Specimen of Papilloma of Septum Nasi.* Dr. LOGAN TURNER showed *Macroscopic and Microscopic Preparations of a Tumour removed from the Right Nasal Fossa.*

Patient was a man, J. B., aged fifty-two, who was seen on September 1st, 1896, complaining of complete obstruction of both nostrils, a protrusion from right nostril, and a swelling of right side of nose and adjacent cheek. Symptoms commenced in right nostril three years before, and were slowly progressive, the external swelling of nose and cheek being first noticed eleven months ago.

On examination, the right nostril was found completely occluded by a growth projecting beyond the alar margin. The external swelling of nose was of soft consistence, semi-fluctuating. The left nostril was occluded by a deviated septum. Nothing could be felt in the naso-pharynx on digital examination. The nasal bones were not expanded, there was no protrusion of right eyeball, no bulging of hard palate or anterior wall of right antrum. There was no glandular enlargement. The age of patient, the recent more rapid growth, the soft consistence, the occasional attacks of hæmorrhage, even with the absence of glandular enlargement, favoured a diagnosis of malignant tumour, probably suitable for complete removal.

Prof. Annandale, through an external incision, completely removed the tumour growing from the septum, by dissecting off all the mucous membrane from the right side of the septum and by removing a portion of the bone.

Three months after operation there is no trace of disease, and the patient breathes freely through the nose.

The tumour, a cauliflower mass, measured  $6\frac{1}{2}$  inches in circumference, with a broad attachment.

Microscopical examination showed a papilloma consisting of a branching connective-tissue framework, containing blood-vessels, and covered everywhere with many layers of epithelial cells, distinctly demarcated from the stroma, but here and there the epithelium shows evidence of invading the subjacent fibrous stroma.

*Case for Diagnosis.* Shown by Dr. BALL.

A man, aged thirty-three, came to the West London Hospital on November 28th, complaining of soreness of left side of throat and dysphagia. He attributed his symptoms to having swallowed a haddock bone about ten months previously. This had stuck in his throat, and had troubled him for a day or two, but he had felt nothing more of it till about three months ago, since when his throat had gradually got more painful. The left faucial pillars are thickened, and the left half of the soft palate does not move. In the left tonsillar region is a small ulcerated area, leading to a cavity about a quarter of an inch deep. All this region feels somewhat indurated to the finger. The epiglottis is red and much thickened, especially towards the left side. The left ary-epiglottic fold and left arytenoid are markedly œdematous and swollen, and the corresponding parts on the right side less so. The glands below the angle of the jaw on the left side are swollen, and slightly tender. There is a strong tubercular family history, but there are no physical signs of disease of the lungs.

Dr. DE HAVILLAND HALL remarked that, having regard to the appearance of the larynx, he had no doubt the pharyngeal ulceration was tubercular in origin.

Dr. DUNDAS GRANT thought at first, from the hardness, it was epitheliomatous, but the examination of the larynx dispelled this idea.

Dr. BALL, in reply, agreed that the appearance of the larynx was indicative of tuberculosis, but thought the case interesting from the condition of the pharynx, and from the fact that the patient attributed his trouble to the impaction of a fish bone.

*Case of Subglottic Stenosis.* Shown by Dr. HERBERT TILLEY.

A female, aged thirty-eight, who had complained of difficulty of breathing for two months. She had no pain. Hoarseness supervened about three weeks after commencement of dyspnœa. No history of syphilis could be obtained.

Laryngoscopic examination showed a normal larynx, but in the subglottic cavity a marked constriction was visible, lined by dry green mucus. Patient had a marked depression of nasal bones, and had a distinct general syphilitic appearance.

*Case of Ulceration of Pharynx.* Shown by Mr. C. A. PARKER.

Jane L., aged twenty-three, came on the 31st December, 1895, with a history of having for years past suffered frequently from acute sore throat. A month previously had an attack lasting fourteen days, after which a discharge from the left ear commenced, unaccompanied by pain.

Examination showed much muco-purulent discharge from the left ear. Chronic rhinitis. Tonsils considerably enlarged and uniformly red, except that here and there there were small bluish-grey patches. She also had considerable swelling of the post-nasal adenoid tissue. Larynx normal.

No other signs of syphilis and no history obtainable. Chest normal.

In five weeks the condition had much improved, and the tonsils, which were uncomfortably big, were amputated. The wounds healed up quickly.

On April 21st she came, as her throat felt uncomfortable. On examination some ulceration was found in the naso-pharynx, and on what was left of the tonsils. A week later there was a marked ulceration in naso-pharynx, especially round the right Eustachian tube, right tonsil, and right side of the soft palate. Operation on post-nasal growths was deemed inadvisable on account of the active ulceration. The ulceration was at this time so suggestive of late secondary or early tertiary syphilis that she was treated with mercury and iodide of potassium.

On May 26th the post-nasal growth was removed. Following on this the throat got rapidly worse, the ulceration spread rapidly over the right side of the pharynx, soft palate, and uvula, and there was a good deal of pus running down from the naso-pharynx—a good view of which could no longer be obtained.

She now had frequent severe headaches, was often delirious at nights, and her evening temperature was raised to about 101° F. This could not be accounted for by the ear trouble, which was practically well.

She was now treated with the compound syrup of hypophosph. internally, and lactic acid locally, and at one time seemed to improve and at another got worse; but on the whole the condition of the right tonsil palate improved, whilst the naso-pharynx got worse.

At the present time great destruction of the palate and uvula can be seen; the right posterior pillar of the fauces is much thickened and œdematous, and studded with yellowish spots, and there is a thickened red mass coming down from the posterior nares immediately behind it. The left posterior pillar and left tonsil are also swollen. The swollen

mass on the right side extends down to the glosso-epiglottidean fold, and there is active ulceration proceeding in the naso-pharynx.

Yesterday we noticed for the first time a small ulcer surrounded by œdematous tissue on the left side of the septum nasi, just opposite the lower border of the middle turbinated body.

Dr. MCBRIDE thought it might be a case of tertiary syphilis.

Dr. GRANT pointed out the œdematous condition of the middle turbinal mucous membrane, and thought there might be empyema of the nasal sinuses; the fact that the patient had suffered from delirium supported this idea.

Mr. PARKER, in reply, stated that the nose condition being quite recent, it could not account for the temperature and delirium. He looked upon it as of tubercular origin.

*Case of Œdema of Arytenoids.* Shown by Dr. DE HAVILLAND HALL.

A. S., aged forty-seven. Present illness dates from October 24th, when the patient complained of a sore throat and cough. Suffered from winter cough for seven years. No history of syphilis.

Admitted into Westminster Hospital on October 30th. On November 1st the fauces, tonsils, and pharynx were stated to be hyperæmic; the ary-epiglottic folds swollen, the right more than the left. Epiglottis red and swollen. Vocal cords not visible. Nares normal.

When first seen on November 2nd, the epiglottis was swollen, the right arytenoid so swollen as to conceal the corresponding cord almost entirely. The left arytenoid only slightly swollen. The swelling of the epiglottis has now almost entirely disappeared, and the right arytenoid is almost two-thirds of the size it was. No rise of temperature.

Dr. TILLEY said the symptoms were identical with the early stages of the patient he showed last meeting, in which tracheotomy was advised.

Dr. NEWMAN asked if there was any albumen, as it had the aspect of the throats that occurred in Bright's disease.

Dr. MCBRIDE said it was very like cases of a rheumatic origin, but it differed from them in colour.

Dr. SEMON suggested pilocarpin injections.

Dr. H. HALL, in reply, stated there was no albumen.

*A Case of Pre-Epiglottic Cyst, with Specimen and Microscopical Section.* Shown by Dr. DUNDAS GRANT and Mr. RICHARD LAKE.

The patient, a married woman, aged thirty, came under Dr. Grant's care on September 10th, 1896, complaining of recurring attacks of pain in the throat, with absolute loss of voice, taste, and power of swallowing. These functional symptoms had occurred suddenly at frequent intervals during the last three or four years, and lasted for two or three days at a time. During them the voice disappeared so completely that not even a whisper could be produced. The bolus of food on attempts at swallowing seemed to stick at the root of the tongue, and had to be rejected. The pain started in the throat and ran down the thyroid and supra-sternal towards the mammary regions. The attacks first came on at a time when

she was the victim of severe mental worry, and were afterwards excited by very slight causes, such as exposure to dust or tobacco smoke.

Examination showed on the lingual aspect of the right half of the epiglottis a rough, reddish, sessile growth like a mass of granulations, on the apex of which there was a shiny yellowish spot. The whole was nearly buried in the exuberant lymphoid tissue of the hypertrophied lingual tonsil, but was found by means of the probe to be growing from, or at all events attached to, the epiglottis. Cocaine was applied, and with Mackenzie's forceps a complete cyst of the size of a small sultana raisin was pulled away, which was handed over to Mr. Lake for examination.

Next day the patient experienced a slight soreness, but a great feeling of relief as if a large obstructing body had been removed. Has enjoyed the freedom from discomfort ever since.

The case seems to illustrate the extraordinary disturbance produced in a neurotic subject by a comparatively insignificant growth touching the epiglottis.

*Report by Mr. LAKE.*—"The cyst is collapsed and folded on itself, and measures in its long diameter half an inch, in its short diameter  $\frac{3}{16}$ ths of an inch.

"Under the microscope the specimen has the following characters:—  
"An outer fibrous sheath, an inner epithelial lining, and a middle lymphoid layer. The inner layer is of ordinary stratified epithelium, the innermost layers of which are cloudy and ill defined, and in the rete there is a total absence of papillæ.

"The lymphoid layer consists of ordinary lymphatic tissue, with follicles similar to those found in all tonsillar strictures and lymphatic glands. There are also traces of muciparous glands in one part of the capsule.

"I am not inclined to think that there was more than one cyst, but the branch-like cavity is due to corrugation of the collapsed walls.

"I consider the growth to be a retention-cyst of a crypt of the lingual tonsil, which as it filled more and more rotated in the line of least resistance, stretching the occluded neck until it became practically a free cyst."

*Case of Thickening of Hard Palate.* Shown by Dr. BOND.

The patient, a girl aged twenty-eight, noticed at junction of hard and soft palate and the mid-line a swelling which ached "like toothache." The growth began nine months ago; has certainly grown during the last three weeks; and consists of three rounded divisions—paler on surface than the rest of mucous membrane, and tender to the touch. It extends for about three-quarters of an inch from before back. Its nature is doubtful, and suggestions as to this were invited. Probably it is an exostosis, and it is proposed to remove it.

*Case of Growth springing from Top of Œsophagus.* Shown by Dr. BOND.

The patient, a woman of thirty, was seen in October last. She complained of sore throat for the preceding nine months, and of marked and

increasing difficulty in swallowing. She looked very ill, was constantly retching and trying to swallow the abundant mucus present.

On examining fauces a large, sloughing, cauliflower-like mass was seen filling all lower pharynx, behind epiglottis, and covering over larynx. On palpation it could be traced down to brim of œsophagus. It was about the size of a couple of walnuts. It was removed with a cold snare. Two large sloughing masses were first removed whilst depressing tongue. The base of growth was caught in snare with a little help from left forefinger, and the mass twisted off, not cut through. There was no hæmorrhage. The next day patient could eat soft food. On microscopic examination Dr. Hewitt found it to be a fibroma.

At present one can see behind and to right of right arytenoid a fungating granular mass of *quasi*-malignant aspect.

*Case of Excision of Larynx and Upper Two Rings of the Trachea for Perichondral Sarcoma of the Cricoid Cartilage.* (Specimen shown at last meeting.) Shown by Mr. W. G. SPENCER.

*Case of Excision of Vocal Cord for Spheroidal-celled Carcinoma.* (Specimen shown at last meeting.) Shown by Mr. W. G. SPENCER.

*Total Extirpation of Larynx for Squamous-celled Epithelioma.* (Patient and Specimen.) Shown by Mr. LAMBERT LACK.

The patient, a man aged fifty-eight, had suffered from hoarseness for about two years. The growth involved the right ventricular band and vocal cord, the anterior two-thirds of left vocal cord, and extended downwards to the first tracheal ring.

The operation was performed on August 15th last. No preliminary tracheotomy. The larynx was exposed by the usual vertical median incision and two transverse incisions, one along the lower border of the hyoid bone, and one about an inch above the sternum, both reaching from sterno-mastoid to sterno-mastoid. The larynx and trachea were then freed all round and separated from the œsophagus behind. The trachea was then cut across and sutured to the skin all round in the lower transverse incision. By this means the trachea was completely shut off from the wound, and there was no danger of any blood, etc., entering it during the subsequent steps of the operation. The larynx was now cut away from the pharynx and removed entire.

The hole left in the pharynx was now very carefully closed by a closely set series of sutures of fine catgut, uniting mucous membrane to mucous membrane. Over these a similar series of sutures was placed uniting the muscular and membranous walls of the gullet, but not piercing the mucous membrane. To strengthen these, other layers of sutures were inserted, bringing all the tags of divided muscles together in the middle line. In this way the wound was obliterated and a strong wall built up, completely shutting off the pharynx, and able to resist the strain of swallowing. The skin was then brought together except for a small triangular space at the upper corner. The entire wound, with the exception of this space, healed by first intention. The patient was from the first day and throughout able to swallow without pain or difficulty.

There was no danger of fluids passing from the pharynx into the wound, exciting inflammatory secretions there, and passing thence down the trachea. Thus the danger of septic lung infection was minimized. The case ran an aseptie and afebrile course, and the patient was walking about in fourteen days, having suffered no more than after a simple tracheotomy. Thus also the tedious and painful after-treatment involving frequent dressings and packing of the wound, and the constant passage of the œsophageal sound, were done away with. Unfortunately, in the first instance the cut was too close to the lower limit of the disease, and later two more rings of the trachea had to be removed.

The patient has no voice, but can whisper distinctly, and is gaining power. He is otherwise quite well, and is able to dispense with a tracheotomy tube.

*Total Extirpation of Larynx with part of Anterior Wall of Pharynx, of Posterior Part of Tongue, and Glands in Neck, for Squamous-celled Epithelioma.* Shown by Mr. LAMBERT LACK.

The patient, a man aged forty-five, complained for about eighteen months of increasing pain and trouble in swallowing, and for the last four months of repeated and occasionally severe hæmorrhages. The tumour involved the epiglottis, aryteno-epiglottic folds, anterior parts of ventricular bands, and adjacent parts of tongue and pharynx, with some small hard moveable glands in the left anterior triangle. The laryngoscopic appearances were peculiar. The transformed epiglottis, as large as a hen's egg—a purple, ulcerated tumour mass—seemed to project up out of the cavity of the larynx, which it concealed from view; and the sharply defined raised edge of the growth on the tongue was by many mistaken for the ulcerated, thickened, partly destroyed epiglottis.

The larynx was removed on September 5th, the glands some five weeks later. The operation was performed in essentially the same way as in the last case, but preceded by a preliminary pharyngotomy to determine its practicability. Owing to the large size of the gap left in the pharynx, the stitching up afterwards was a very difficult matter, and there was considerable tension on the upper stitches (those uniting tongue to pharynx). These held, however, for five days, during which time the patient could swallow perfectly well, and the greater part of the wound healed. A small fistula then formed at the upper part of the wound, and liquids came through on swallowing. This could be prevented by packing, but the patient was now fed by the œsophagus tube. The stitches had held long enough to serve their main purpose; the whole wound with the exception of this sinus healed by first intention. The after course was quite afebrile, and there was never a risk of septic products from pharynx or wound entering the air passages. The sinus slowly contracted, and causes the patient no trouble in swallowing either solids or liquids, although it still exists, and will probably require closing. The patient seems now in good health, and has put on a great deal of flesh. He had been previously refused operation at three other hospitals.

The PRESIDENT thought that these cases opened a new era for the operation. The results, as a rule, however, left the patient in such a

terrible state that it made it necessary for laryngologists to make as early a diagnosis as possible.

Dr. NEWMAN agreed with Dr. Semon that unless the disease was recognized early the case had better be left alone.

Dr. HALL stated that in the case of the woman (Mr. Spencer's case), the patient had greatly improved in general condition since the operation. In view of the fact that the growth was entirely subglottic, an early diagnosis was out of the question. At the time the operation was performed, extirpation of the larynx was the only practicable procedure.

Mr. SPENCER said that his patient, in which the whole larynx had been excised, had recovered good general health, could swallow easily, and hold conversations with the nurses and patients in the hospital. He had not done the operation with any other view than that of palliation, but in any case the patient's life would be prolonged and rendered comfortable for months.

Mr. LACK said he did not see what else could have been done. There was no alternative to the operation, and there was always a chance of cure. He thought the operation justifiable.

The PRESIDENT stated that he hoped it was quite understood that he did not go so far as to say that the operation was unjustifiable.

*Microscopic Specimens of a Pedunculated Tubercular Growth of the Vocal Cords.* Shown by Dr. ADOLPH BRONNER.

The larynx was in other respects apparently normal. The patient had been suffering from pulmonary phthisis for over two years, and had been hoarse for a few months. There was a small red, regular, pedunculated growth on the edge of the left vocal cord. This was removed by forceps. The patient died about a year later. There was no further history of hoarseness, and the larynx apparently remained normal up to death.

The Clinical Research Association reported as follows :—

“ The growth is composed of vascular connective tissue, like granulation tissue, in which are embedded the acini of mucous glands. There are one or two giant cells beneath the mucous membrane, which are probably indicative of the tuberculous nature of the affection.”

Dr. MCBRIDE referred to the German literature, where these were mentioned as tubercular tumours simulating fibromata and papillomata, by Avellis and others.

*Fibroma of Right Nasal Cavity, together with Microscopic Specimen of the same, prepared by an old Histological Method for Rapid Diagnosis.* Shown by Dr. JOBSON HORNE.

A woman, aged seventy, on the 23rd of June last met with a fall, injuring the right side. A week after epistaxis commenced, and had persisted; at times it had been of daily recurrence, the loss of blood frequently copious. A month after the epistaxis commenced the right nasal cavity was noticed to be obstructed, and it was on this account the patient eventually sought relief. There was no localized pain, but frontal headache.

About one month ago, examination of the nose found the right nasal cavity occupied by an irregularly rounded, opaque, dusky-grey tumour, with blood vessels coursing near its surface; the free margin was in contact with the septum, which bulged towards the left. There was complete stenosis. Gentle manipulation showed firm consistency with a sessile attachment; some thick purulent matter escaped, and the growth bled readily. No bleeding point was detected in any other part of the nasal cavities. No extension of growth to the naso-pharyngeal region.

On transillumination a rim of brightness appeared immediately beneath the right lower eyelid; absent on the left side. Light was transmitted through the right wing of the nose, but not through the left. In other respects the limits of transillumination were symmetrical. A portion of the growth was then removed with Krause's snare for microscopic examination.

The piece of tissue was treated by a method to which Dr. Kanthack has recently drawn attention. It was placed in a test-tube with water and boiled; boiling for a minute and a half sufficed for the size of the tissue. It was then ready for cutting on a freezing microtome. The sections were stained in hæmatin and mounted in the usual way, the entire process requiring from fifteen minutes to half an hour. The water being sterilized by boiling, the tissue could have been safely left corked in the test-tube for twenty-four or thirty-six hours. Tissues hardened by this rapid method can be preserved for longer periods in alcohol or Müller's fluid, or treated by the paraffin method.

Under the microscope the growth presented the appearances of a fibroma; no evidence of malignancy. Since the removal of a portion the epistaxis had ceased, and the stenosis had been reduced.

*Case of Congenital Nasal Stenosis.* Shown by Dr. WATSON WILLIAMS.

A man, aged twenty-eight, in whom the right nostril was occluded by a congenital web of skin, situated at the junction of the vestibule with the nasal passage proper. The web practically occluded the right nostril, for although in the centre there was a minute valvular opening which just admitted a probe, the patient was unable to blow out or inspire any air. No syphilis or any illness, or any disease of the nose, but at the age of three or four had a severe blow on the nose from a fall, which had produced a deviation to the sound side. There was a deviation of the septal cartilage at its anterior extremity, with the convex side towards the occluded nostril, and a not very marked horizontal similar deflection of the middle of the septum. There was no enlargement of the inferior turbinated body, and no defective development of the superior maxillary or nasal bones on the occluded side. The eyes were bilaterally symmetrical in position. Moreover, there was no crowding of the teeth or deformity of the palate.

The patient was shown as a clinical instance in which nature had imitated the experiments of Ziem in occluding the nasal passages on one side in young animals, with results on which considerable stress had been laid in support of the view that septal deviation was very frequently due to partial nasal obstruction; for though septal deviation existed in

this patient, probably resulting from the blow which also caused external deformity of the nose, none of the other associated deformities described by Ziem were present.

*Specimens of Angio-Fibroma of Pharynx, illustrating the Effects of Pressure on the Superior Maxillary Bones.* Shown by Mr. A. A. BOWLBY.

*Case of Pharyngeal Tumour.* Shown by Mr. A. A. BOWLBY.

Dr. SCANES SPICER considered the tumour a cyst.

Dr. NEWMAN had a very similar case two years ago, which proved to be an enchondroma arising from the intervertebral discs.

Mr. LAMBERT LACK thought it might be an adenoma.

Dr. SEMON considered it too hard for a cyst.

Mr. BOWLBY, in reply, said he would operate after Christmas ; at present he looked upon it as being a fibroma.

## FIRST SPANISH CONGRESS OF OTOTOLOGY, RHINOLOGY, AND LARYNGOLOGY.

November 19th, 1896. (*Special Report by Dr. RUEDA.*)

*President*—Dr. ROQUER.

*Secretary*—Dr. GOMEZ DE LA MATA.

### SECTION OF LARYNGOLOGY.

Dr. BOTEY (Barcelona). *Thyrotomy in Laryngeal Cancer.*

There is no doubt that, in spite of the performance of two hundred total extirpations up to the present date, the more rational method of treating laryngeal cancer is that of laryngo-fissure, when the new growth is diagnosed early, when it is circumscribed, intrinsic, unilateral, and limited to the mucosa—conditions which are often found present during the first four or five months of the disease. The opinions of Semon form the basis for all scientific treatment, as Botey has maintained since the year 1890, after operating on a case of recurrent laryngeal cancer.

The laryngectomies, performed often enough, and in every quarter, have given only bad results, for the reason that the patients had not come under observation until the lesion was too far advanced ; and the statistics of this operation cannot compare with those of laryngo-fissure, when performed in operable cases—that is to say, in cases where only a limited portion of the interior of the larynx, such as a vocal cord or ventricular band, was diseased, and where neither the cartilaginous structures nor the neighbouring parts, such as the base of the tongue, pharynx, or œsophagus, were involved. The progress, often so insidious, of cancer of the larynx at its commencement, is one obstacle to early diagnosis. This should always be made with the mirror, aided by the microscope, for, as the data of Ariza show, the use of the mirror alone cannot be relied upon to afford a diagnosis as to the variety of carcinoma which is of real value.

Laryngectomies performed in Spain, up to the present time, have not

been encouraging. Since the first total extirpation made by Federico Rudio in 1878, followed by those of Foro (of Cadiz), Cisneros, Ramon de la Sota (of Seville), and, lastly, by one performed by the reporter, all have terminated fatally.

Dr. Botey consequently maintained the clinical distinction, established by Krishaber, between cases which are operable and those which are inoperable, by reason of being not intrinsic, and of having come under the observation of the laryngologist at a too advanced stage; and he agrees with Felix Semon in thinking that a patient of a certain age, troubled with hoarseness of voice which resists treatment, should be carefully examined with a view to radical operation, which almost always will amount to laryngo-fissure and removal of tissue involved in the growth.

Dr. BOTEY. *Tracheal Injections of Creosote in Laryngo-Pulmonary Tuberculosis.*

For at least five years I have injected antiseptic, and particularly creosoted, solutions, into the laryngo-tracheal passages, in cases of tuberculosis of the larynx and lung. Commencing with a few cubic centimètres, I have sometimes arrived at injecting as much as one hundred grammes of antiseptic fluid.

I was the first to practise these tracheal injections in man, as shown by a communication which Dr. Bouchard read in my name to the Académie des Sciences de Paris on July 21st, 1890.

Two students in the Veterinary College at Lyons injected through a tracheal wound in a horse, in order to kill it, as much as thirty-two litres of water before death ensued. This incident, as well as the accident in Bichat's practice (in which a Hôtel Dieu patient received some bouillon through an œsophageal sound clumsily introduced into the trachea, and was none the worse for it), had not been repeated in human pathology. The extraordinary power of absorption by the respiratory mucosa (greater than that of the gastric mucosa, and even of the hypodermic route), together with the feeble sensitiveness of the mucosa below the pharyngo-laryngeal region, perfectly explains the facility of the method and the tolerance of the organism.

Nearly all the patients submitted to the treatment are tuberculous subjects, who have admirably supported the injection of as much as ten grammes of a two per cent. oily solution of creosote or guaiacol. In certain instances of laryngeal intolerance I have made tracheal injections through a fine canula, one millimètre in diameter, perforating the anterior wall of the windpipe. This plan has caused no accident to make me regret its employment.

Without making claim of marvellous results, one may say that the clinical effects, both general and local, are encouraging, and are superior to those obtained by drugs administered through the stomach.

Dr. BOTEY. *Presentation of Instruments.*

1. A protector for the larynx and epiglottis.
2. Three small instruments for cleansing the fundus of the external auditory meatus.

3. An armchair for throat and ear examinations.
4. Chisels for facilitating Stacke's operation.
5. Special chisels to facilitate the enlarging of cranial openings in oto-encephalic surgery.
6. Cutting forceps for extirpation of portions of tubercular epiglottis.

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SECTION OF OTOTOLOGY AND RHINOLOGY. *November 20th.*

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President—Dr. VERDOS.

Secretary—Dr. F. RUEDA.

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Dr. CAMPO. *Treatment of Hypertrophic Rhinitis with One Hundred per Cent. Resorcine.*

Applying the treatment employed by Dr. Marage for the cure of adenoid vegetations to that of hypertrophic rhinitis, and with satisfactory results, he arrives at the following conclusions :—

1. There is no longer any necessity to have recourse to surgical or galvano-caustic measures.
2. The duration of the treatment varies from two to four months.
3. No untoward symptoms occur to contra-indicate the employment of resorcine.

Dr. LOPE CORRALERO. *Middle-Ear Suppuration in Infants. Its Resistance to Treatment and Means of Cure.*

The cause of the obstinacy of these lesions in childhood is to be found in the prominence of the lymphatic system, the frequency of infection with the exanthemata, and the anatomy of the ear. Treatment must be both local and general.

Dr. PELAEZ. *Some Considerations on Chronic Rhinitis, and on the Erectile Tissue and the Mucous Membrane of the Nose.*

A physiological study of the possible relations between the erectile organs of the body, and also of the pathological relations between the erectile tissue of the genital organs and that of the nasal mucosa. Scrofula is related to a certain class of rhinitis, to which must be ascribed, by reason of complicated lymphatic arrangements, some of the diseased conditions of the cervical glands.

Dr. BOTEY. *Treatment of Vertigo, Tinnitus, and certain Labyrinthine Affections, by Puncture of the Membrane of the Fenestra Rotunda, followed by Aspiration.*

In a work communicated to the Congress of Berlin in 1890, dealing with my experiments on evulsion of the stapes, I alluded to the fact that the escape of perilymph following injury to the membrane of the round or oval window produced no noticeable change in the animal. Applying my experiments made on the cadaver, I undertook the operation on the living subject, and found it attended with no insuperable difficulties. With an instrument of my own devising, and which I now exhibit, one

can perforate the membrana rotunda without difficulty, and cause the escape of a drop of perilymph, without danger of wounding the organs contained in the labyrinth. I also show a small trocar used for aspirating the perilymphatic fluid after perforation of the membrana rotunda.

As a preliminary it is necessary to make an incision along the whole length of the posterior border of the membrana tympani, from the posterior fold to the floor of the meatus. This gives a sufficient field of operation. The proceeding gives favourable results in certain cases, both of vertigo due to excessive labyrinthine pressure and of tinnitus, and indeed gives results comparable to those of puncture of the cornea in glaucoma, wherever a pathological condition of the labyrinth is characterized by increased tension.

Dr. FORUZ. *Contributions to the History of Otology in Spain.*

Historical details of the researches of Marcos Vinals on the anatomy of the temporal bone, taken from a little-known memoir entitled, "Nueva Descripcion de la Porcion Petrosa del Temporal manifestando varios describeimientos nechos en il organo interno del oido."

Dr. BOTEY. *Treatment of Chronic Sinusitis Frontalis, and of the Secondary Intracranial Lesions.*

In my own practice three cases have demanded operative intervention, and from these I have formed my ideas on this subject. All the other cases under my care have yielded to intranasal measures, such as simple lavage, catheterization, removal of the head of middle turbinate, etc.

The first of the three cases is that of a woman of nineteen, subject for two years to suppuration in the right nostril. Rhinoscopy revealed swelling of the middle turbinate, fungosity of the middle meatus, and a small quantity of pus; increased tenderness at the internal angle of the orbit, with slight œdema; symptoms of sinusitis of the maxillary antrum, with probable empyema of the ethmoidal cells. A small Cadwell's lamp, placed under the edge of the orbit on the diseased side, showed opacity of the frontal sinus.

Operation was performed from the front by means of a chisel and mallet. Creamy pus was let out, and all granulations were removed. To afford an easy exit for the pus, I decided to establish a communication with the anterior ethmoidal cells, which were found to be involved in the disease, and, breaking down the roof, made a passage into the middle meatus.

By this method drainage at the lowest point was obtained, and the scar was unnoticeable. Complete cure has resulted.

In my second case I had to do with a subacute osteomyelitis of the frontal sinuses and of the frontal bone, with perforation of the posterior wall of the left sinus, meningo-cerebral infection, subdural and cerebral abscess, and fungosity of the meninges; a set of lesions demanding an operation which included trephining the frontal sinus, removal of granulations, and intra-cerebral puncture, which gave issue to pus. Finally, a cerebral hernia was developed, and after partial removal of this, meningo-encephalitis set in with fatal termination.

In my third case, that of a man of twenty-eight, in whom I diagnosed right frontal sinusitis with retention of pus, grave cerebral symptoms were present, and I found, after opening the sinus, a perforation in its postero-superior wall. I enlarged this on detecting granulations of the dura mater with subdural abscess. These were respectively removed and drained, and at the same time an exploratory cerebral puncture was made with negative result. To afford suitable drainage a passage into the middle meatus was established, and finally, by the employment of Koenig's osteo-periosteal-cutaneous method, a permanent cure was obtained. My personal experience authorizes me to make the following statements:—

1. In frontal sinusitis with retention of pus one must trephine from the front without delay.

2. The external operation wound can heal by first intention if an opening of sufficient size has been made into the middle meatus.

3. If symptoms cause a suspicion of meningo-encephalic complications, one should trephine the posterior wall of the sinus, and undertake suitable intracranial treatment without fear of injuring the brain.

*Ernest Waggett (Trans.).*

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#### AUSTRIAN OTOLOGICAL SOCIETY.

27th October, 1896. ("Monatschrift für Ohrenheilkunde.")

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*President*—Prof. POLITZER.      *Secretary*—Dr. POLLAK.

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#### Dr. ALT. *A Case of Complete Deafness from Mumps.*

This was a girl, aged twelve, who was brought to Prof. Gruber's clinic on the 7th July with a statement that she had suffered from mumps for eight days, and had on the first day shown signs of disturbances of hearing, which increased rapidly, along with noises in the head and slight vertigo, until, on the third day, the deafness was absolute.

On examination the membrana tympani of the right side was found to be normal, and that of the left side completely destroyed, as the result of suppuration which had existed two years previously. Neither high nor deep tones were heard opposite either ear. C, both on the mastoid processes and on the skull, was heard only for a very much shortened period. There was complete deafness for loud speech and whistling. As the child did not reside in Vienna the home doctor was recommended to administer iodide of potassium, and to practise twenty injections of pilocarpin. All the instructions were carried out absolutely, and the child was again brought for observation on the 8th August, when the hearing distance on the left side for conversation extended to thirty centimètres, and on the right only to the immediate neighbourhood of the ear. At the present time the hearing distance on the left side is one mètre, and on the right thirty centimètres.

Dr. Alt referred to the cases already published of deafness from mumps, and also to the theories with regard to it given by Roosa,

Virchow, and Colin. In the case before them he supposed, following Moos, that there was a serous exudation into the cochlea or the auditory nerve, in view of the absence of any severe disturbances of co-ordination. He would offer no definite opinion as to whether the disease would have subsided without treatment, or whether the improvement was due to the remedies employed—iodine, pilocarpin, and acoustic exercises.

Prof. URBANTSCHITSCH had not seen a case of bilateral deafness from mumps, but, on the other hand, four unilateral ones. In one of these cases he had made use, with advantage, of the continuous current, after twenty applications of which the hearing power was restored. He had found no good result from pilocarpin. He had also seen unilateral auditory anæsthesia follow disease of the sub-maxillary gland, and in one case complete deafness came on after four days, while in another the deafness lasted for a year and a half, and then spontaneously subsided. Prof. Urbantschitsch had never seen recovery take place in cases of bilateral affection, but he had, in unilateral cases, several times seen it, without any treatment. Ordinarily, he made use of absorbent remedies, and especially iodide of potassium. He had seen no good results from pilocarpin. It was hardly possible that acoustic exercises could produce improvement in a case of total deafness, when they had only been used for fourteen days. He was of the opinion that the deafness in mumps was the result of exudation into the sound-perceiving structures of the organ of hearing. The possibility of recovery depended upon whether the exudation, and the disturbances produced by it, were of a severe or of a slight nature. Prof. Urbantschitsch mentioned that he had found good results follow acoustic exercises in cases of syphilitic deafness.

Dr. VON FRANKEL had observed bilateral facial paralysis and polyneuritis in a case of mumps.

Prof. POLITZER, in opposition to Colin, was of the opinion that epidemic parotitis was an infectious disease localizing itself in the parotid gland, and in which the labyrinthine affection, accompanied with the deafness, was a metastatic exudation similar to that in the epididymus and the mamma.

Dr. GOMPERTZ. *An Unusual Appearance in a Case of Mastoid Operation.*

The patient was a boy aged seven, with post-scarlatinal inflammation of the left ear of three and a half years' duration. The discharge was profuse and fœtid, and was accompanied by a bulging of the upper wall of the meatus in its deeper part, which was of the size of a pea, more or less globular, and leaving only a very fine orifice between it and the inferior wall. Slitting up of this intumescence and curetting were only followed by a transitory improvement; therefore Dr. Gompertz carried out Zaufal's radical operation in the middle of March. The antrum was full of cheesy pus, there was a cavity of the size of a cherry in the mastoid process, filled with granulation tissue, and the two first auditory ossicles were absent. Koerner's flaps were made, and it was found that there was an almost complete atresia of the auditory meatus close to the tympanic membrane, so that it was somewhat difficult to make the flaps. The

after progress was simple, and in the beginning of May the suppuration had ceased, but there was still seen, at intervals of a week or two, a little non-fœtid pus. The transplanted flaps had attached themselves extremely well, and there remained an oval, sharp-edged opening in place of almost the whole of the membrana tympani, only a sickle-shaped strip at the upper and back part having regrown. The condition remained thus till the month of August. At the end of September the patient returned, complaining of headache and frequent vomiting. The suppuration was very slight, but along the whole extent of the artificially produced defect in the osseous meatus, and even in the cartilaginous section, there projected a greyish blue, elastic, semi-cylindrical outgrowth.

At the present moment this swelling has so increased that, beginning at the tympanic margin and continuing to the concha, it narrows the meatus to a very considerable degree. Dr. Gompertz was of the opinion that it was an upheaval of the Koerner flaps by cholesteatoma formation, but he proposed to make in the first instance an exploratory puncture, as there was a possibility that it might be a protrusion of the dura mater, through a defect in the roof of the antrum. He was anxious to show the case before he carried out any operative measures.

Dr. URBANTSCHITSCH remarked that there was in all probability an epithelial membrane, with cholesteatoma behind it; he had seen two such cases, and had rapidly cured them by slitting up the swelling.

Dr. KAUFMANN had seen a similar case at Halle, where it was looked upon as an epithelial cyst.

Prof. POLITZER thought that there was a new connective tissue membrane, by means of which the attic was separated from the atrium of the tympanic cavity, and that the attic thus shut off was distended with viscid mucus.

Prof. POLITZER. *Operative Opening of the Cavities of the Middle Ear; Removal of Sequestra, consisting of the Tympanic Frame and the Labyrinth.*

The patient was a Galician woman, aged thirty, who since her childhood had suffered from otorrhœa. For the last three months there had been painful exacerbations of the suppuration, with speedy development of total paralysis of the right side of the face. Before she was admitted into the wards some polypoid outgrowths were removed from the meatus. On examination there was found profuse otorrhœa with granulations filling a large part of the osseous meatus. The meatus was narrowed in its entire length. The mastoid process presented a normal appearance, and was not tender to pressure. The tuning-fork tests gave no information, as the patient's statements with regard to the localization of hearing during Weber and Rinne's experiments were contradictory. The duration of the perception of tuning-fork vibrations of various pitch were shortened. She was in the sixth month of pregnancy.

In consideration of the local appearance and the facial paralysis it was determined to practise operative opening of the tympanic cavity. The mastoid was chiselled open layer by layer, and the antrum was cleared of the granulations with which it was filled. The postero-

superior wall of the osseous meatus and the outer wall of the attic were removed, so that the tympanic cavity was laid open, and the scraping out of the luxuriant crop of granulations was proceeded with. The sharp spoon struck upon several sequestra embedded in the mass of granulations, and these were removed one after another. One turned out to be the modiolus of the osseous cochlea, in which the osseous lamina spiralis was clearly distinguishable. It was 3·5 millimètres in breadth, 1·5 in height, and about 3 in length. A piece which appeared to have been originally attached to this was also removed, and measured 1·5 millimètres in breadth and thickness. A second sequesterum consisted of the anterior segment of the capsule of the cochlea. The largest sequesterum, which was only removed with difficulty, was an elongated rough piece of bone, in which there could be recognized distinctly a piece of the horizontal semicircular canal, and the adjacent portion of the osseous border of the vestibule.

After the removal of these masses of granulation and sequestra there still seemed to be a considerable amount of pus in the antero-inferior portions of the middle ear.

After syringing and dressing the patient went through a normal and afebrile course. Four weeks later the secretion in the deeper parts was reduced to a minimum, but the total deafness and facial paralysis remained unchanged.

Dr. KAUFMANN. *Demonstration of a Patient with complete Bilateral Deafness supervening Three Days after a Fall on the Back of the Head.*

The patient was a boy aged thirteen, who was previously perfectly healthy, with good hearing, and at no time any disease of the ear. On the 26th of September he fell from a gymnastic apparatus on to the back of his head, striking the right side on the floor; he did not lose consciousness, but felt at once severe pain in the head, with vertigo; half an hour afterwards he went along with a companion to his dwelling, a walk of about five minutes, and then he vomited. In the night he had repeated attacks of vomiting, headache, and vertigo. During the next two days he felt somewhat better, but on the 29th, in the afternoon, there suddenly supervened bilateral deafness. On the 1st October he presented himself at Prof. Politzer's out-patient department, where the following condition was found. The patient was well developed for his age, the skull rachitic. On the right parietal bone there was a painless fluctuating swelling covered with normal soft parts, extending forward as far as the coronal suture, in the middle line as far as the sagittal one, outwards towards the parietal tuberosity, and backwards to the lambdoidal suture. It was from two to three centimètres in thickness. The denticulations of the lambdoidal suture could be easily felt through it, and above this a triangular portion of the lower end of the parietal bone (about two centimètres in length and one in breadth at its base) was driven in to the depth of about half a centimètre; the skin over the right mastoid process presented a greenish discoloration; there were no abnormal signs in connection with the nervous system; the internal organs were normal, as also the fundus oculi and visual acuity (there

was slight horizontal nystagmus after some time); the auricle and meatus were normal, and the membrana tympani retracted, and there were no signs of injury; deafness was absolute, even for whistles and trumpets, no tuning-forks being heard; there was distinct unsteadiness on turning round with the eyes closed. Exploratory puncture of the fluctuating swelling by means of the hypodermic syringe evacuated thin, bright red, hæmorrhagic fluid.

The further course of the symptoms was that in a few days the vertigo completely disappeared, and the fluctuating swelling underwent spontaneous absorption; the fractured part of the skull was no longer delimitable by the 8th October. In the left ear the hearing improved to a very slight degree (vowel-hearing), but in the right one he could, as early as the 2nd October, distinctly comprehend vowels and single words at a distance of half a mètre, while on the 4th the sounds of the whistle and trumpet could be heard across the whole length of the room. At present, the hearing of the right ear for single words extends to two-thirds of a mètre, and the tuning-fork at any part of the skull is lateralized to the right. The duration of perception for high and deep tones is very considerably lowered. The treatment consisted of iodide of sodium, internally, pilocarpin injections, and injections of strichnine. The case appeared to be one of fracture of the right parietal bone with hæmatocele (meningocele spuria), and complete bilateral deafness with vertigo.

Dr. Kaufmann discussed exhaustively the question of the site of the disease, and thought he could exclude any central affection (temporal lobe, acoustic paths, internal capsule, corpora geniculata, and quadrigemina), as also a bilateral affection of the medulla oblongata, or a fracture of the base of the skull, with injury to both temporal bones. According to his opinion, the affection was situated in both labyrinths, and it was either a traumatic lesion of the labyrinths—possibly the so-called commotio labyrinthica, or a labyrinthine affection resulting from concussion of the brain. He referred to the experiments which had been made with regard to concussion of the brain (Ferrari, Duret, Gussenbauer), from which it was known that, by compression of the elastic skull, a sudden increase of pressure could be brought about which affected the whole contents of the endo-cranium, and was sufficient to set up wave movements in the cerebro-spinal fluid. These waves were propagated in all directions, and they made themselves more particularly felt in those regions where the largest collections of the fluid were present (*e.g.*, at the base of the brain). This sudden increase of pressure must extend to the peri-lymphatic spaces in view of their well-proved communication with the sub-arachnoid space. This disturbance would be communicated to the endo-lymph, and in this way small hæmorrhages would be likely to take place in the endo-lymphatic walls, just as Duret had proved to take place in the walls of the larger blood channels in commotio cerebri (capillary rupture and other lesions at spots considerably removed from the original injury). For the explanation of the occurrence of the deafness at an interval of three days after the injury, he referred to the views of Bollinger, Schwan, and Michel on the so-called late traumatic apoplexy (traumatic degeneration, necrotic softening, secondary hæmorrhage).

He cited several analogous cases published by Urbantschitsch, Politzer, Schwartze, and others; anatomical investigations by Habermann, and experiments made by Ostmann; and expressed his belief that further physiological and experimental investigations would afford an explanation of these cases.

Prof. GRUBER was of the opinion that a fissure of the base of the brain could not be excluded, even although the membrana tympani was intact. Hæmorrhage into the labyrinth could also occur a few days after the original injury. At the same time it was an argument against the existence of these injuries that the patient was beginning to hear again.

Prof. POLITZER agreed with Prof. Gruber's view, but still it was quite reasonable to suppose that concussion of the cranial bones might bring about hæmorrhage into the labyrinth.

Dr. KAUFMANN thought that even if it were known from the literature of cases that fracture of the base of the skull could run its course without severe symptoms, still, in the present case, the absence of all characteristic symptoms, the direction of the blow, the late occurrence of the deafness, and the diminution of the symptoms seemed to point to the absence of such injury.

Prof. GRUBER called attention, on the other hand, to a case of fracture of the base of the skull shown in the Medical Society by Prof. Weinlechner, in which the symptoms appeared so slight that the patient was sent out of the hospital and died next day. He thought the prognosis in this case was not a favourable one.

Dr. POLLAK. *Prevention of Infection by Eustachian Catheters.*

Referring to the difficulty of disinfecting catheters in large out-patient departments, he had got Reiner in Vienna to make him a suitable receptacle in which the catheters were pushed through a perforated plate of caoutchouc with numbers, so that they could be kept for individual patients and preserved in antiseptic fluids.

Dr. KAUFMANN'S *Demonstration of Specimens:*

I. *Chronic Median Suppurative Otitis. Pyæmic Symptoms. Radical Operation, Opening of an Extra-Dural Abscess. Fifteen days later, Symptoms of Cerebral Compression. Operation on an Abscess of the Right Temporal Lobe. Thrombo-phlebitis. Meningitis.*

The specimen was from a man aged nineteen, who in his childhood had gone through measles and pneumonia. For several years he had had dulness of hearing and discharge from both ears. In the middle of last August he was attacked with severe rigors, followed by intense frontal headache and severe pain in and behind the right ear. At the same time giddiness and vomiting came on. On the way to the hospital at Vienna he was again attacked with rigors and severe headache. At the end of August he came to Prof. Politzer's out-patient department, where there was made out chronic median suppurative otitis, with destruction of the membranæ tympanorum, swelling and granulation in the mucous membrane of the tympanum, fetid suppuration and lowering of hearing power for loud speech both sides to one to two mètres.

There were no signs in connection with the mastoid process. The patient was taken into the in-patient department. Temperature was 39·8. There were no rigors. The fundus oculi was normal. No sign of disease of the internal organs was present. The intelligence was clear, but there was severe headache and vertigo, with slight tenderness on pressure below the tip of the right mastoid process.

On the 3rd September the radical operation, with exposure of the sinus, was undertaken. The sinus was found at a slight depth, about three-quarters of a centimètre, behind the meatus. Close round it there was seen thick, inoffensive pus, which under pressure welled out to the amount of something more than a teaspoonful. A probe passed through a large opening in the roof of the mastoid about one centimètre in diameter, into a subdural abscess, apparently of about the size of a nut with smooth walls.

The dura was not visible through the wound. The sinus was exposed in its whole extent through the mastoid process, the wall being normal everywhere except in a small part of its uppermost segment, where it had a dirty greyish-green tint. The sinus canal was not opened. The radical operation was then proceeded with, and the attic and middle ear were found filled with dirty greyish-white macerated epidermic (cholesteatoma) masses, behind which there were seen granulations growing from the osseous walls.

The ossicles were absent. The membranous meatus was then slit up, and an iodoform dressing applied. For the next few days the patient was free from fever, and complained only of severe headache. At the first change of dressing on the fifth day the wound was seen to be normal, and devoid of any considerable amount of secretion. On the 14th the patient vomited repeatedly, and on the 18th September there was suddenly a rise of temperature to 38·2, with clouding of the intelligence. The pulse became slower (54), and there was slight ptosis, with diminished reaction of the pupils, no abnormality in the fundus oculi, and no retraction of the neck. The patellar reflex was lost.

The patient was now removed into Prof. Albert's wards for further operation (?extra-dural cerebral abscess). Under a moderate degree of ether narcosis the operation was proceeded with by Dr. Ewald. The existing incision was prolonged upwards, in a crescentic form, for three or four centimètres above the attachment of the auricle, where the bones were chiselled through, at the upper part, and reflected downwards, while the dura mater of the right temporal lobe, on its lateral and basal aspects, was exposed. There was distinct pulsation, and a small spot on the lateral aspect looked suspicious, on account of a bluish discoloration. The dura mater was further incised, and the cerebral substance protruded. The scalpel was pushed into the temporal lobe about three centimètre deep, in a forward direction. On the point of the knife there was found a little thick pus, which, however, in spite of an enlargement of the incision, did not evacuate itself. A thick canula was introduced into the canal of the puncture, and a syringe of about five centimètres capacity was attached to it. At the depth of about three centimètres, discoloured, greenish, thick, and extremely offensive pus was withdrawn by aspiration.

The canal was then held open by means of fine forceps, and about ten cubic centimètres of pus escaped. Iodoform gauze was introduced in the abscess cavity, and the wound was stitched up. A dressing was applied. Immediately after the operation the pulse rose to seventy, the intelligence became clearer, and in the afternoon the patient could answer when called, and asked for water, but was extremely restless. On the 19th September his temperature was 39·6, his restlessness very considerable. The dressings were changed, and a portion of the cerebrum prolapsed, of about the size of a hen's egg. In the afternoon the dressing had to be changed again, as the patient was very restless, and tore off his dressings. On the removal of the dressing there were found lying in it two pieces of brain substance about the size of a hen's egg. Temperature 39·8. Next day he was quite unconscious, had right ptosis, restlessness, trismus, inequality of the pupils (left the larger), inactivity to light, tensor reflex lost, pulse 160, temperature 40°. Death at ten o'clock at night. *Post-mortem* diagnosis: Abscessus cerebri ichorosus lobi temporalis dextri cum perforatione in ventricul. lateral. dextr. e thrombo-phlebitide purulenta ichorosa sinus sigmoid. dextr. subsequente meningit. purulent. diffusa.

## II. *Malformation of both Ears.*

In this case there was absence of the meatus and of the membrane, and malformation of the ossicles. The case will be published in full later on.

Dr. GUSTAV BRÜHL. *A Method of Injecting the Petrous Bone with Metallic Mercury.*

The temporal bones of new-born children, adults, and animals are decalcified and dehydrated in a two to ten per cent. solution of hydrochloric acid. The openings are then stopped up with sponge, and mercury is injected through the fenestra ovalis by means of a hypodermic syringe; the Fallopian canal can also be filled in the same way. In order to make the bones transparent, Dr. Brühl carries out the method recommended by Katz ("Archiv für Ohrenheilk.," Oct., 1884), somewhat modified inasmuch as he suspends the preparation in xylol. By means of these injections he found that the cubic capacity of the inner ear was in the new-born child about one hundred and twenty cubic millimètres, and in adults two hundred and ten. Photographs of these, as well as of non-decalcified preparations by means of the Röntgen rays, gave good pictures of the osseous labyrinth. He demonstrated a number of such pictures and specimens from infants at birth, adults, monkeys, and dogs, in which all the details of the osseous labyrinth could be distinctly recognized.

*Dundas Grant (Trans. and Abst.).*

BRITISH MEDICAL ASSOCIATION.

*Annual Meeting, July, 1896.*

SECTION OF PATHOLOGY AND BACTERIOLOGY.

A DISCUSSION ON THE PATHOLOGY OF EXOPHTHALMIC GOITRE.

Dr. G. R. MURRAY: Although changes in the nervous system have been often observed in this disease, they are so inconstant in presence and so diverse in character when present as to give no clear support of a nervous origin of the disease. Experimental and pathological disturbance of parts of the medulla no doubt produce many of the symptoms, but against these facts must be set the foregoing statement. On the other hand, the speaker knows of no case in which *post-mortem* examination of a patient dead of exophthalmic goitre has revealed a normal structure of the thyroid. Just as the disease is the antithesis of myxœdema, so the microscopic appearances in the former are the antithesis to the fibrosis, the consequent degeneration and paucity of secreting elements seen in the thyroid characteristic of the latter disease. The thyroid in Graves' disease has, indeed, precisely the appearance (figures given) found in compensatory hypertrophy following partial removal of normal thyroid, an appearance indicating over-activity in secretion, together with the development of new secreting tissue. This fact, together with the development of the symptoms of Graves' disease due to excessive taking of thyroid extract, and the disappearance of such symptoms in exophthalmic cases treated by partial ablation or iodine injections, points to over-secretion and excessive absorption of normal or abnormal thyroid products as the essential etiological factor in exophthalmic goitre.

Mr. VICTOR HORSLEY exhibited *Micro-Photographs*, showing compensatory hypertrophy, and supported the opener.

Mr. WALTER EDMUNDS confirmed Dr. Murray's views as to the microscopic evidences of hypersecretion, but he considered that in Graves' disease the latter was compensatory, and, therefore, *not* the primary lesion. Myxœdema and Graves' disease were not antithetical, for (1) in the acute form in dogs they resembled one another—tremors and attacks of dyspnœa occurring in both. (2) The exophthalmos was not due to excessive absorption, for injection of the juice in monkeys did not produce it, though the symptom was readily caused by cocaine. (3) The theory did not explain the occurrence of one-sided exophthalmos and goitre. (4) In cases where myxœdema followed Graves' disease a period of good health should supervene; whereas, on the contrary, cases were reported where the two appeared to overlap. (5) Thyroid feeding in Graves' disease did not increase the symptoms. On the other hand, enlargement of the thymus, with signs of functional activity, were reported. The pathology must be partly nervous and partly humeral, with possibly a derangement of the general metabolism as the primary lesion.

Prof. HAMILTON spoke of hypertrophy after partial removal, and of the numerous cases in which the thymus was enlarged.

Prof. ADAMI mentioned how frequently in the *post-mortem* room local hypertrophies were found in the thyroid, as well as variations in the character of the secretion of the vesicles.

Dr. ABRAM supported Dr. Murray.

Dr. ROBERT HUTCHINSON, dealing with the chemical aspect of the question, maintained that the sole active element was the colloid material. Baumann's thyroidin was merely an artificial derivative of this. He had failed to confirm Fränkel's views as to the presence of an alkaloidal substance. (1) Was there over-secretion of colloid, or (2) qualitative alteration in the secretion? Morbid anatomists were agreed that there was no increase of colloid in the thyroid, nor was there evidence of unusually rapid absorption from the sacs. With regard to the second question, the speaker had treated two patients with extracts of a large goitre from a typical case of Graves' disease. No palpitation, exophthalmos, or goitre was produced, but a reaction occurred exactly similar to that resulting from healthy sheep's thyroid, which they were already taking for skin disease and obesity respectively. Similarly, in a dog after removal of the thyroid, only slight rise of temperature and pulse rate resulted from large doses of the abnormal gland. So far, then, it appeared that the secretion was not abnormal in character. Further, Graves' disease and myxœdema were no more antithetical than was the latter to any fever accompanied by increased metabolism, and no arguments were to be deduced from such a comparison. He considered the disease to be essentially due to altered tissue-metabolism, possibly of central nervous origin. The results of partial ablation in Graves' disease did not preclude this view, for if the tendency to acceleration of tissue-metabolism—a well-established property of normal thyroid secretion—was removed by partial ablation, it was evidently possible that even a functional loss of control on the part of the nervous system might fail to suffice to start that train of metabolic changes which led to the symptoms of Graves' disease.

Dr. ABRAHAMS pointed out that, according to Gerhardt, cases occurred without any thyroid changes, while the spleen and blood-forming glands were enlarged. Gerhardt considered nerve vascular changes to be antecedent to gland change, and in confirmation of this the speaker had seen marked improvement produced by the vaso-constrictor action of suprarenal extract. Martins asserted that the colloid was diminished in quantity and always abnormal in quality. The speaker compared the condition to a toxæmia, such as lead poisoning or uræmia.

Dr. MURRAY, in reply, said he was not satisfied as to the co-existence of myxœdema and Graves' disease. He asked if Prof. Gerhardt's remarks referred to microscopic and not merely clinical appearances. In collating all the cases the balance was in favour of regarding thyroid feeding as harmful in Graves' disease.

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## SECTION OF DISEASES OF CHILDREN.

("Brit. Med. Journ.," Sept. 12th, 1896.)

WHAT ARE THE ELEMENTS OF SUCCESS AND FAILURE IN  
TRACHEOTOMY IN CHILDREN?

Dr. HECTOR CAMERON commenced his answer to this question by expressing the opinion that, though early tracheotomy—before, that is, the lung and the organism was impaired by dyspnœa—was imperative, nevertheless the hopes of success were greater in cases operated late in the course of the disease (not of the dyspnœa), when, in fact, though recently complicated by stenosis, the disease was commencing to subside. Speaking of details of the operation and after-treatment, he agreed with Giraldés in regarding the depressed vital condition as the main cause of tracheal ulceration, for which an ill-fitting tube was, as a rule, held responsible. Surgical emphysema, and the pneumo-thorax which Champneys' experiments show to be secondary to the former, were due, as a rule, to the tracheal incision not corresponding in position to the main wound, the result often of rotation of the viscus when the sharp hook was employed. Prolapse of the thymus into the wound seemed to have no untoward significance. It was readily kept within the thorax by the tube. Return of fluids by the wound during swallowing might or might not cause serious trouble. It was certainly not due to tracheo-œsophageal fistula, as might be imagined. It occurred when the tube was out as well as in, and was therefore not due to muscular embarrassment caused by the instrument. The two constant causative elements present were breathing by the wound in the trachea, and a duration of some days since the operation. The probable explanation was loss of sensitiveness and alertness of the larynx. Semi-solid food, or the prone position, sufficed to rectify the condition. For tracheal and bronchial extension of membrane, as well as cervical cellulitis, the original severity of the attack was in the main responsible.

Mr. TUBBY unfavourably criticized the sharp hook and the tent. He recommended the insertion of Baker's rubber tube after twenty-four hours, and the removal of this on the third or fourth day.

Dr. MANSEL SYMPSON considered that if dyspnœa continued unimproved for two hours, in spite of the tent and steam kettle, tracheotomy should be performed. Death in the majority of a series at St. Bartholomew's Hospital was due to downward extension of membrane.

Dr. RANKIN advocated calomel; one grain hourly.

Dr. ASHLEY CUMMINS was in favour of the routine use of the warm spray, but not of the tent.

Dr. ADOLPH BRONNER believed that in almost all cases a trial should first be made with intubation. Antitoxin prevented the formation of large pieces of membrane and aided its separation. Antiseptic measures in dressing were desirable. The outer tube should be fenestrated above, so that its removal was not necessary when testing the possibility of laryngeal breathing.

Dr. ROBERTSON had seen excellent results with perchloride of iron spray.

Dr. CRAWFORD RENTON had the highest opinion of intubation as a preliminary measure.

The PRESIDENT (Dr. Finlayson) greatly objected to the steam kettle and tent, as much reducing the vitality of the patient. He had no belief in a membranous croup apart from diphtheria.

Dr. CAMERON, in reply, deprecated the tent and recommended large sponges, used with an antiseptic, and changed every twenty minutes.

#### PAPILLOMATA OF THE LARYNX IN CHILDREN.

Dr. HUNTER MACKENZIE, after quoting various authorities with regard to prognosis of recurrence after thyrotomy, gives a decided opinion that this measure is "distinctly contra-indicated." With regard to endolaryngeal operations, he concludes that "experience shows that . . . recurrence usually takes place." He believes intubation to be here, as in all chronic stenoses, contra-indicated. One case, however (Baldwin), appears to have been cured thereby. The danger of the method was proved in Lennox Browne's case of hæmorrhage in a child of three. Tracheotomy alone remains, not only as the palliative, but the permanent radical measure. Several cases of permanent cure have now been reported. The growths, it appears, become detached, and may be found in the sputum. (Specimen of sputum shown.) Absence of irritation probably accounts for this atrophy. The usual length of time during which the wearing of a tube is necessary seems to be from six to twelve months.

Dr. COLEY mentioned a case in which the trachea was blocked by papillomata the whole way down.

Dr. MANSEL SYMPSON related a case in which the growths disappeared for a time after tracheotomy, but recurred.

Mr. A. POWER noted the analogy to the cure of urethral warts after lateral lithotomy.

Dr. BRONNER had seen cure after wearing a tube for two years. The tendency to recurrence increased with age.

Dr. MACKENZIE, in reply, stated that the growths in the trachea were often congenital and due to syphilis.

*Ernest Waggett.*

#### AMERICAN OTOLOGICAL SOCIETY.

(From Vol. VI., Part III. of "*Transactions*," July 14th, 1896.)

Dr. ARTHUR MATHEWSON, *President.*

Dr. E. B. DENCH. *Thrombosis of the Lateral Sinus following Suppurative Otitis Media; Operation; Cure.*

A youth of eighteen, who five years previously suffered with acute otitis media, had now pain in the same ear, extending back over mastoid, with nausea and vertigo, and recurrence of discharge. On the fifth day the

membrane was incised, and a Leiter's coil applied over the tender mastoid ; however, twelve hours later he had a rigor, with a temperature of  $105.8^{\circ}$  F., with severe headache and incontinence of urine and fæces. The reporter saw him twenty-four hours later, when the temperature was  $103^{\circ}$ . The mastoid was opened, and found full of offensive material ; there was destruction of its bony walls, with exposure of the meninges.

The lateral sinus was filled with a firm clot from near the torcular to the jugular bulb ; this clot was removed, the sinus cleansed, and packed with iodoform gauze. Recovery was uninterrupted.

Dr. JOHN L. ADAMS. *A Case of Thrombosis of the Lateral Sinus, with Recovery after Operation.*

The patient in this case was a lady twenty-four years of age, who had suffered five years ago with left-sided otorrhœa, which lasted one year. She caught cold six weeks before consulting Dr. Adams, and had been under treatment, but had steadily become worse. The day previous she had rigors, vomited twice, and fainted several times, the temperature rising to  $104^{\circ}$ , with intense pain in the mastoid and frontal region. The mastoid was freely opened, the purulent contents removed, and the cavity carefully cleansed ; the lateral sinus was next exposed, a small quantity of pus escaping from the sigmoid groove. The sinus was occluded with clot ; this was removed upwards towards the torcular, but was not removed to its lowest limit towards the jugular fossa, as the curette could not reach the lower end. The recovery was complete, though retarded, the temperature being  $104^{\circ}$  the next day, and did not arrive at normal for twelve days, the wrist and ankle joint being slightly infected on the third day, and cough being troublesome from the second to the ninth days. The speaker concluded with a complete and careful *résumé* of the subject.

Dr. KNAPP saw a case during last winter, diagnosed early, in which he removed a clot from the upper part of the jugular. The patient died not long after.

In this case, though the vein below the clot was scarcely traceable, there were small thrombi extending its whole length. What he wished to emphasize was the necessity for ligature of the jugular near to the clavicle as the first step in the operation.

Dr. BACON quoted a case of brain abscess with symptoms of sinus pyæmia, to illustrate the fact that a former lesion did at times show the symptoms of the other affection.

Dr. GRADENIG. Abstraction of fluid blood from the sinus does not demonstrate beyond question the absence of thrombus ; he had seen two cases of incomplete obstruction by thrombi.

Dr. FRYER was also in favour of ligature of the jugular.

Dr. SPRAGUE narrated a case in which a sinus had been freed from clot and the jugular ligatured. After some time thick pus exuded from the sinus ; this continued for a short period, when occipital pain commenced, and the patient rapidly sank with meningeal symptoms. There was basal suppuration, temporo-sphenoidal abscess, and extensive clotting of the sinuses.

Dr. RANDALL reported a case having the symptoms of sinus thrombosis, in which there proved to be no involvement of the sinus.

Drs. DENCH and ADAMS briefly replied, the former drawing attention to the use of sterile saline solution by him in irrigation of the sinus.

*R. Lake.*

*(To be continued.)*

## ABSTRACTS.

### DIPHTHERIA, &C.

**Benjamin, D.**—*The Treatment of Diphtheria.* "Journ. of the Amer. Med. Assoc.," Oct. 17th, 1896.

IN the first part of this paper the treatment of diphtheria by antitoxin is discussed; statistics, most of which have been used, over and over again, by other writers, are quoted, and no very definite opinion as to the value of antitoxin is arrived at.

On the other hand, by the antiseptic treatment of diphtheria, the author has not had a single death to record during more than ten years (100 cases). Membranous croup, however, is classed as a completely separate disease, and is not included in these results. The treatment is very simple, consisting of (1) the internal administration of large doses of tr. ferri. perchlor., and (2) the local application to nose and throat, by means of an atomizer, of a solution containing acid. acet. dil., pot. chlorat., acid. carbol., tr. ferri. chlorid., pulv. alumin., acid. salicyl., and aq. ros. in water.

The statistics of this local antiseptic treatment of diphtheria are striking, if not extensive, viz :—

|                |           |     |                 |
|----------------|-----------|-----|-----------------|
| Benjamin.....  | 100 cases | ... | 100 recoveries. |
| Loeffler ..... | 71 "      |     | 71 "            |
| Kelchner ..... | 75 "      |     | 75 "            |

The more malignant the case, the more brilliant are the results obtained.

*A. J. Hutchison.*

**D'Aguzzano, A.**—*Serotherapy in Diphtheria.* "Trans. of the Royal Acad. delle Scienze Med.," 1896.

THE author, in treating of a large series of cases occurring under most variable hygienic conditions, considers serotherapy of unquestionable value in treatment of diphtheria. Accepting the unchanged hygienic conditions of the generality of cases, and the unvaried character of diphtheria epidemics, he demonstrates that the mortality percentage following the old local methods of treatment of 47.7 per cent. has, since the adoption of serotherapy, been reduced to 23.5 per cent. The variation in percentage published by numerous observers is due to the following factors :—

1. The period of the disease in which the injection is practised.
2. The quantity of the serum injected.
3. The local treatment of diphtheria, and its various complications.
4. The varying proportions in the statistics of cases of faucial and laryngeal diphtheria.

*Jefferson Bettman.*

**D'Astros, L.**—*Intubation in Diphtheria before and since the Employment of Serotherapy.* "Marseille Méd.," Oct. 1, 1896.

DIPHTHERIA had constantly been very severe in the hospitals of Marseilles. The rate of mortality was in general eighty-nine per cent. Since the introduction

of serotherapy the rate had fallen. During eighteen months the author has performed one hundred and thirteen intubations for laryngeal croup (non-diphtheritic, fourteen, with five deaths; diphtheritic, ninety-nine, with forty-four deaths). Of the forty-four deaths eleven supervened on the first day of hospital treatment. The indications and complications of intubation are carefully discussed.

A. Cartaz.

**Dixey, F. A.**—*Vital Statistics of Diphtheria in London.* "Brit. Med. Journ.," Aug. 22, 1896.

THIS paper, dealing in the main—as its title implies—with the public health aspect of the disease, contains figures which go to prove that school attendance is responsible in a marked degree for increased incidence. A general view of the statistics during the last five years indicates that the mortality in the metropolis has received a considerable check, difficult to attribute to any other cause than the introduction of the antitoxin treatment. This conclusion is further strengthened when the ratio of deaths to notifications is examined, the case-mortality during 1895 being the lowest on record, namely, 20.4 per cent.

Ernest Waggett.

**Graetzer (Sprottau).**—*Tincture of Myrrh in Diphtheria.* "Münchener Med. Woch.," 1896, No. 47.

THE author recommends the internal use of this drug in diphtheria. He has used it in ten cases with good result.

Michael.

**Grixoni, G.**—*The presence of Bacilli resembling those of Diphtheria in cases of Purulent Otitis, and Cure by Serotherapy.* "Riforma Medica," Nos. 151, 152, 1896.

OF late years the etiology of purulent otitis media has been most thoroughly studied. Notwithstanding numerous forms of micro-organisms have been discovered and recognized, the presence of Klebs-Löffler bacilli seems to have been overlooked, excepting in cases of false membranes found in the ear and complicating pharyngeal diphtheria. The author devoted his special attention to this fact, and succeeded in finding these characteristic bacilli in cases of otitis media purulenta. He refers in detail to a case occurring in a boy eleven years old, in whom the creamy discharge from the ear was found to contain, besides various types of micro-organisms, bacilli which bore a strong resemblance to those of diphtheria. Cultures of these, conducted in the accepted manner, revealed two varieties of diphtheritic bacilli, which the author distinguishes as Numbers 1 and 2. Number 1 is identical with the Klebs-Löffler bacillus, excepting that it lacks in virulency. It differs from the bacillus of pseudo-diphtheria in acidifying the broth in which the cultures have been made. In this respect it is analogous to the real diphtheria bacillus, which, according to Escherich, constitutes a valuable differential feature between true and spurious diphtheria bacillus. The presence of diphtheria bacilli being established in the case, the author instituted the serum treatment with complete success.

Jefferson Bettman.

**Rosenthal, Edwin (Philadelphia).**—*Reduced Period of Intubation by the Serum Treatment of Laryngeal Diphtheria.* "The Medical and Surgical Reporter," May 30, 1896.

THE author wishes to prove:—(1) That the operation of intubation is the most desirable, and is more favourable than that of tracheotomy; (2) that with the serum treatment of diphtheria tracheotomy will no longer be necessary in this disease; (3) that the serum treatment in diphtheria has made a most marked and favourable reduction in the time the tube is worn in the larynx.

The author divides his statistics into percentages representing under and above one hundred and twenty hours (five days), for, in those cases requiring intubation longer, tracheotomy formerly was indicated. He also separates the statistics of American and European observers owing to the difference in technique, the former removing the string at once, while the latter leave it attached and withdraw the tube every twenty-four or forty-eight hours.

#### BEFORE THE USE OF SERUM.

AMERICAN.—In the author's series of one hundred cases there were thirty-eight recoveries. In these the tube was worn :—

|                           |     |     |     |                 |
|---------------------------|-----|-----|-----|-----------------|
| Under 120 hours, 12 cases | ... | ... | ... | 31'40 per cent. |
| Over 120 hours, 26 cases  | ... | ... | ... | 68'60 per cent. |

Dillon Brown places the time for final extubation at 123½ hours. O'Dwyer found that the average time the tube was worn in 158 recoveries was 146-147 hours.

Fischer reports sixteen recoveries in which the tube was worn :—

|                          |     |     |     |              |
|--------------------------|-----|-----|-----|--------------|
| Under 120 hours, 4 cases | ... | ... | ... | 25 per cent. |
| Over 120 hours, 12 cases | ... | ... | ... | 75 per cent. |

EUROPEAN.—Gustav Baer performed final extubation as follows :—

|                           |     |     |     |                 |
|---------------------------|-----|-----|-----|-----------------|
| Under 120 hours, 20 cases | ... | ... | ... | 64'50 per cent. |
| Over 120 hours, 11 cases  | ... | ... | ... | 35'50 per cent. |

Von Ranke performed final extubation :—

|                |     |     |     |                 |
|----------------|-----|-----|-----|-----------------|
| Under 96 hours | ... | ... | ... | 72'50 per cent. |
| Over 96 hours  | ... | ... | ... | 27'50 per cent. |

Huebner has given 100 hours as an average for final extubation.

In Bokai's 215 recoveries the tube was worn :—

|                            |     |     |     |                 |
|----------------------------|-----|-----|-----|-----------------|
| Under 120 hours, 177 cases | ... | ... | ... | 82'33 per cent. |
| Over 120 hours, 38 cases   | ... | ... | ... | 17'67 per cent. |

The average duration in Bokai's cases was 79 hours.

#### PERIOD OF SERUM TREATMENT.

EUROPEAN.—Huebner reports 10 intubation cases treated with antitoxin, in which the tube was worn for 37 hours on an average.

In Von Ranke's cases the tube was removed :—

|                          |     |     |     |                |
|--------------------------|-----|-----|-----|----------------|
| Under 96 hours, 87 cases | ... | ... | ... | 87'7 per cent. |
| Over 96 hours, 3 cases   | ... | ... | ... | 3'7 per cent.  |

Of 90 cases intubated by Bokai since the introduction of the serum treatment, 45 (50 per cent.) recovered. In one of these tracheotomy was performed. Of the other 44 cases :—

|                                 |                                 |
|---------------------------------|---------------------------------|
| 77'26 per cent.                 | were extubated within 72 hours. |
| 13'63    ,,        ,,        ,, | in from 72 to 120 hours.        |
| 9'11     ,,        ,,        ,, | after 120 hours.                |

The average duration was 61 hours ; before the serum treatment was employed the average was 79 hours. The use of serum has, therefore, lowered the duration of intubation 18 hours.

AMERICAN.—O'Dwyer intubated 30 cases since the serum period, of which 20 recovered (66⅔ per cent.). In 19 of these cases :—

|                          |                                  |
|--------------------------|----------------------------------|
| 89½ per cent., 17 cases, | were extubated within 120 hours. |
| 10½ per cent., 2 cases,  | were extubated at 120 hours.     |

The average duration was 83½ hours, while before the serum period it was 147 hours. The serum treatment has, therefore, lessened the time of intubation 63½ hours.

Dr. Louis Fischer reports 30 cases ; of these :—

|                          |                                  |
|--------------------------|----------------------------------|
| 63⅓ per cent., 19 cases, | were extubated before 120 hours. |
| 36⅓ per cent., 11 cases, | were extubated over 120 hours.   |

The tube was worn on an average 108 hours, while before the serum period the average time was 176 hours. The serum treatment has, therefore, effected a reduction of 68 hours.

Rosenthal has used antitoxin in conjunction with intubation in 20 cases, with 18 recoveries. In the latter the tube was worn :—

Under 120 hours, 12 cases ... .. 66 $\frac{2}{3}$  per cent.

Over 120 hours, 6 cases ... .. 33 $\frac{1}{3}$  per cent.

The average duration was 114 hours, and, compared with 185 hours before the serum period, there is a reduction of 71 hours.

The author also compares the results of intubation and tracheotomy, and shows that under the serum treatment, intubation suffices, and that tracheotomy may be avoided.

A. B. Kelly.

**Sharp, G.**—*Is Membranous Croup always due to the Microbe of Diphtheria?*

“Edinburgh Med. Journ.,” Dec., 1896.

By membranous croup the author means “a membrane in the windpipe with no “distinct evidence of previous diphtheria in the throat.” Of course cases in which the membrane has been produced by mechanical, chemical, or thermal agents are excluded.

After quoting and criticizing the opinions of various authorities on the question whether croup and diphtheria are one or are two diseases, the author gives his own opinion in favour of the identity of croup and diphtheria. He inclines to the view that membrane in the larynx is due to the poison of diphtheria. Several instructive cases are cited in support of his opinion.

A. J. Hutchison.

**Thresh, J. C.**—*A Discussion on Diphtheria in Town and Country.* (British Medical Association Annual Meeting.) “Brit. Med. Journ.,” Aug. 22, 1896.

THE statistics contained in this valuable paper, which relates to the disease in the county of Essex, should be read in the original by those interested in the increased death—and case—rate during recent years.

Among other items it is interesting to note that the annual autumnal increase commences during the period of the school holidays.

The nature of the subsoil and conformation of ground seem to bear no direct relation to the local incidence, and, in comparison with overcrowding, the quality of water, sanitation, and subsoil seem to be of trifling importance. It is the author's impression that these latter elements, together with meteorological influences, are mainly important in so far as they give rise to catarrhal conditions and a weakened state of the air passages.

Ernest Waggett.

**Williams, F.** (Boston).—*The Prevention of the Spread of Diphtheria by the Bacterial Test.* “Boston Med. and Surg. Journ.,” Dec. 3, 1896.

THE author draws attention to the importance of examining the secretion in the throat for the Klebs-Loeffler bacillus of all who have been exposed to diphtherial infection, and treating cases where it is found immediately, whether they show symptoms of the disease or not. He states that he has found the bacillus in the throats of persons who have been exposed to infection, but who were apparently perfectly well. In treating such cases at once, he thinks it would improve the prospect of rapid recovery and diminish the mortality. He notes the fact that in a case of diphtheria at the Harvard Medical School, Loeffler's bacillus appeared and disappeared at intervals five months after the throat was cleared of membrane following the injection of antitoxin, and that in the fifth month the bacilli were sufficiently virulent to kill a guinea-pig in thirty-six hours, although the patient was apparently well.

StGeorge Reid.

## MOUTH, &amp;c.

**Bobone, J.**—*Gonorrhœic Angina of Ludwig.* "Bollet. delle Malatt. dell' Orecchio, etc.," Agosto, 1896.

SINCE Traube first called attention to a case of gonorrhœal rheumatism, the connection between urethral blenorragia and inflammatory processes occurring in various organs more or less distant from the genital organs, has been closely studied. Not only cases of peritonitis and orchitis, but instances of pleuritis, endocarditis, parotitis, neuritis, hæmorrhagic exanthemata, iritis, irido-choroiditis, have since been observed and published. Of late Noble has published cases of polyarthritis, myositis, and one case of inflammation of the atlanto-axoid articulation, whilst Litten recorded a case of chorea, all occurring with and due to gonorrhœa. The author then relates a case of angina of Ludwig occurring in an individual aged twenty-eight years, who had been suffering for several years of chronic urethral blenorragia. The patient, on and off, had several acute exacerbations of the urethral trouble, in part due to sexual excesses and other inciting causes, and early in August presented himself with a large swelling just below the under jaw. Fever set in and the tumefaction increased, developing all the symptoms of angina of Ludwig. A primary incision produced but little benefit, but a second, repeated a few days later, gave exit to a large quantity of thick, creamy, foetid pus. Fever was immediately reduced, and dysphagia disappeared the day after. In treating of the etiology of the case, Bobone excludes dental caries, malarial infection, and influence of cold as direct causes. As the patient, however, was suffering at the same time from an acute attack based on the chronic urethral blenorragia, the author is inclined to trace the angina to direct gonorrhœal infection. Although he was not able to find the gonococcus in the pus, which partly may be due to hasty examination, or, as in many similar cases of gonorrhœal infection, due to complete absence of these micro-organisms, this fact by no means excludes the gonorrhœic origin. To substantiate this he cites the observations of Fiuger, Wicherkiewicz, etc.

*Jefferson Bettman.*

**Cameron, Hector C.**—*Tubercular Ulcer of the Tongue. Report of Two Cases.* "Glasgow Med. Journ.," Aug. 1896.

IN both cases the ulcers were situated between the tip of the tongue and the attachment of the frenum, so that when the tongue was protruded they came in contact with rough, irregular edges of the teeth. Both patients suffered from chronic phthisis, and the sputa contained tubercle bacilli. It was probable that in coughing the under surface of the tip of the tongue had been abraded (as occurs in whooping cough), and then the abraded surface had been inoculated with tubercle by means of the sputa.

*A. J. Hutchison.*

**Coulter, H. J.**—*Quinsy: the Differential Diagnosis and Treatment.* "Journ. of the Amer. Med. Assoc.," Nov. 7, 1896.

IN treating quinsy the author uses a mercurial cathartic and a saline, and, at its proper time, incision. Besides these, he for many years prescribed quinine, opium, guaiacum, sodium salicylate, aconite, and belladonna. In 1892 these were given up in favour of salol, which in turn gave place, eighteen months ago, to lactophenin. As compared with salol, "its action is more prompt; it has caused no undesirable "after effects; it not only relieves the pain, but reduces the fever with equal "certainty." The dose seems to be ten grains every three hours. In the author's experience, it is by far the most successful treatment for quinsy.

*A. J. Hutchison.*

E A R.

**Beauregard, H., and Dupuy, E.**—*On the Electrical Variation (Current of Action) caused in the Auditory Nerve by Sound.* "Archiv. Internat. Laryngol., Rhinol., Otol.," July-Aug., 1896.

FROGS and guinea-pigs were employed, non-polarizable electrodes being placed respectively on the membrana tympani and the distal section of the auditory nerve exposed and cut in its intracranial course. On producing a high note with the whistle, a well-marked current of action was registered by the galvanometer. Fatigue effects are found to be easily produced, but an interval of one minute sufficed for recuperation. In the guinea-pig, low tones produce much less electrical variation than high tones. The authors hope in the future to determine by this method the hearing limits in different animals. They claim that their results prove that analysis of sound is a function of the ear, and that the nerve transmits to the brain the results of the analysis.

Ernest Waggett.

**Bezold, Fr.** (Munich).—*On the Present State of the Various Tests for Hearing.* "Arch. of Otol.," July, 1896.

BEZOLD holds that there is no reason to suppose that *noises* any more than musical sounds are heard by means of any other region than the cochlea, and quotes Kreidl's observation that goldfish, which have no cochlea, are perfectly deaf; as also his own, that in bilateral necrosis of the labyrinth total deafness is present.

The *best and most rapid test of hearing* is the human speech, if the consonants are classified as: (1) the deep-like R and V (U); (2) the middle, like the explosives B, K, T; (3) the high, of which S, Sh, and G [soft.—ED.] are strong, and F weak. He employs the numbers (German) as test words, and, to insure constant intensity, whisps them with the residual air left after a forced expiration. The use of these is found of value in the detection of simulation.

He protests against the prevalent tendency to underrate and reject the *tuning-fork tests by bone conduction*. Even in old age he considers diminution of bone conduction to have the same clinical significance as at other periods of life. For testing bone conduction he excludes very high and very low forks, and uses only A, a', and occasionally a. The B C for a' is sometimes shortened or lost, while for A it is lengthened, as in some cases of sclerosis. He practises *Weber's test* with the a' fork as most accurate in acute exudative processes in the middle ear; and he considers it a very serious sign if in suppurative inflammation, while the fork is not heard by air conduction, the lateralization of the sound in the affected ear ceases after having been present, this indicating extension of the suppurative process to the internal ear. The same fork (a') is used for *Rinné's test*, and by preference a specimen which, after dying away on the mastoid, still vibrates for thirty seconds before a normal ear. He warns against dependence on this test in unilateral affections. Even slight degrees of ankylosis of the stapes on one side may be detected in the presence of an extreme degree on the other by means of this test, in spite of the hearing for speech being normal, or nearly so. [We should advise great caution in interpreting such a result, unless the influence of increased bone conduction on the most affected side were excluded or discounted.—D. G.] In exudative and swollen conditions Rinné is always [?] positive though shortened. [Not "always," but, at most, "often."—D. G.]

The changes in hearing power under various tests in cases of obvious fixation of the conducting apparatus establish a clinical picture which, when found in cases

with normal-looking tympani, justify a diagnosis of a deep-seated fixation—ankylosis of the stapes. This has been confirmed by *post-mortem* examination, and the clinical picture is the following: diminution or loss of hearing for the lowest notes in the tone-scale, simultaneous elongation of B C for the lower tones, a much shortened positive Rinné [mistranslated as “well-marked positive Rinné”—D. G.] if hearing is comparatively good, or a negative Rinné if it is very bad, always supposing that the opposite is not nearly normal, and that there is no deception. The *graphic method* of representing percentages of hearing power by air conduction for tuning-forks to the number of nine or ten and covering eight or nine octaves is highly commended, especially in diseases of the inner ear. He thinks too much weight has been attached to a loss of hearing of the highest pitched notes, and that it is only of significance as a sign of disease of the internal ear when there is at the same time diminution or loss of bone conduction.

The possibility of diagnosing bilateral and unilateral deafness as such, as distinguished from relative defect of hearing. Loss of hearing for speech seems to depend on the loss of a certain small portion of the tone-scale. [What this portion is is not made clear in the paper.—D. G.] In *unilateral absolute deafness* there is complete loss of hearing for tuning-forks from  $A_2$  to  $a^1$ , but only partial for those from  $a^2$  to  $f^2$ , it being impossible to exclude the opposite healthy ear in the case of the higher tones. The amount of hearing for these tones, as shown by two cases, was: for  $a^2$ , 0·17 to 0·19; for  $f^2$ , 0·24 to 0·3; for  $c^4$ , 0·4 to 0·47; for  $f^4$ , 0·5 to 0·57 of the normal. A greater amount than this would indicate some degree of hearing power in the supposed “deaf” ear.

[It is regrettable that the translator has here and there allowed some errors to creep into his generally excellent rendering of the original paper. Thus: p. 275, second last line, there should be “U” (or Oo) instead of “V”; p. 277, last line, should be “inner ear” instead of “middle ear”; p. 278, line 19, should be “we may find,” instead of “we find”; p. 278, lines 37 and 38, should be “the diagnosis of slight degrees of ankylosis of the stapes *on one side in the presence of pronounced sclerosis on the other*,” instead of “the diagnosis of slight degrees of ankylosis of the stapes in pronounced unilateral sclerosis”; p. 279, line 4, should read “often” instead of “always”; p. 281, line 7, should read “low” instead of “high.” It will be seen that many of these express the opposite of Prof. Bezold’s views, and, we are sure, also of the translator’s views. No doubt circumstances interfered with the thoughtful revision of the translation, some of the statements in which could not but astound the experienced otologist, and oblige him to seek for their explanation in the original.—D. G.]

*Dundas Grant.*

**Cartaz, A.**—*Facial Paralysis of Otitic Origin.* “Arch. Internat. Laryng., Rhin., et Otol.,” July-Aug., 1896.

FACIAL paralysis, associated with acute or subacute middle-ear catarrh, may have its immediate cause either in compression of the nerve in the second part of the aqueductus Fallopii—the bony wall of which is frequently incomplete—or in actual inflammation of the nerve or its sheath. Paralysis from neuritis, secondary to the tympanic inflammation, is doubtless the more frequent occurrence; but cases do occur in which simple compression appears to be the sole cause. To the latter class must belong the case described by Grüber, in which the paralysis disappeared forty-eight hours after paracentesis. The author relates two cases illustrative of either class respectively. In a young man an acute catarrh of the right ear, due to exposure while suffering with sore throat, became complicated on the third day with well-marked right facial paralysis.

Paracentesis was performed on the bulging drumhead and serous fluid let out. On the following day the paralysis had almost entirely disappeared. The rapid onset, and especially the rapid recovery, point to simple compression as the cause of the paralysis. In the second case—that of a girl of seventeen—an attack of influenza was complicated with acute earache, followed in forty-eight hours by facial palsy. The air douche and instillation were employed, and pain and deafness were relieved. The facial paralysis, however, proved rebellious; and the function of the nerve was not restored without a prolonged course of electrical treatment. In this case the paralysis was clearly not due to a mere compression of the nerve trunk.

*Ernest Waggett.*

**Colles, C. J.**—*Rupture of the Drumhead of the Ear from Violent Aërial Concussion; with a Report of Two Cases.* “*Amer. Med. Surg. Bulletin*,” Dec. 5, 1896.

AFTER a short paper on rupture of the drumhead from aërial concussion the author reports the following cases:—

During the testing of a new gun on September 28th, 1895, a premature explosion took place, producing a pressure estimated at six thousand to seven thousand pounds to the square inch. Two men standing on the gun platform were killed, and four others standing to the right and rear of the platform were hurled to the ground. Two of these sustained injuries to the ear.

Case 1.—Lieutenant G. M. No history of previous ear trouble; deafened by the terrific report; could not hear at all for some time; no pain, but considerable tinnitus. A few hours later the right meatus was found full of blood; membrane covered with clot; ordinary voice heard at three feet; watch not at all; left membrane slightly congested.

Right ear gently syringed, Politzer bag used, and meatus dried and closed with cotton-wool. A large portion of the anterior and inferior segments of drum-head had been blown out; the tip of manubrium projected into opening. Parts remained perfectly dry; no pain, but considerable tinnitus. Perforation steadily healed, and was completely closed by December 1st. Hearing also improved, till watch could be heard at seven feet. Tinnitus continued. This may have been partly accounted for by the fact that patient was cutting a wisdom tooth on same side. At last report hearing is as good as ever; slight, but not annoying, tinnitus continues, wisdom tooth being nearly through. Ear is sensitive and very susceptible to shock. General condition excellent throughout.

Case 2.—Private P. R. No history of previous ear trouble. Blown down backwards, bled from nose, and heard violent hammering noise in ears. After a few moments could hear, but not well, and could “blow through his ears.” Writer did not see this patient till about six months later; during this time treatment had been carried out by Major J. V. R. Hoff. Both drumheads were destroyed by the explosion. When seen by author there was no tinnitus, no vertigo; left ear discharged profusely, while discharge from right had ceased.

The right membrane showed a small perforation in upper posterior segment. Parts dry. In left drumhead was a large loss of substance in lower half; malleus not distinguishable; edges of perforation red and granulating. Canal full of pus. Bone conduction better than aërial. Watch heard at three inches; ordinary voice understood at about ten feet in both ears. Right ear healed, and at last report perforation in left had almost closed, and discharge had ceased. Hearing for ordinary voice improved to about fifteen feet. He feels well in every way.

*A. J. Hutchison*

**Cozzolino, Vincenzo, Prof.**—*Pseudo-Meningo-Cerebral or Meningeal Symptoms in Acute Exudative Middle-Ear Inflammation, occurring in Early Childhood, etc.* "Bollet. delle Malatt. dell' Orecchio, etc.," Guglio, 1896.

IN referring to an earlier publication of his,<sup>1</sup> the author reviews in detail and compares his own clinical observations with those of Rasch, published in the "Jahrbuch für Kinderheilk.," April, 1894. The latter came to the conclusion that the train of symptoms arising from acute exudations in the middle ear in young infants, is generally mistaken for cases of meningitis. This would readily account for the reported cases of recovery from the latter disease. Cozzolino further dwells upon the necessity of a closer attention on part of physicians, especially of pediatricians, to otoscopic examinations and aural pathology in cases of pyæmic "exotitide." This is of major importance, inasmuch as the general symptoms are less marked and of shorter duration than those presented by adults. Again, some of the symptoms, such as stasis of the optic pupilla, optic neuritis, etc., are wanting in similar cases occurring in infancy. *Jefferson Bettman.*

**Dench, E. B.**—*The Treatment of Otorrhœa and its importance.* "Amer. Med. Surg. Bulletin," Nov. 14th, 1896.

THIS is a paper, read to general practitioners, dealing with the diagnosis and treatment of the various kinds of otorrhœa. The following few points may be referred to:—In treatment, the author objects to the use of strips of gauze to secure drainage, but recommends syringing with a one in three thousand or one in five thousand solution of perchloride of mercury. Peroxide of hydrogen is condemned. The author evidently doubts its germicidal properties, and thinks that, on account of the sudden evolution of gas that takes place when it is mixed with pus, its use in the ear is not free from danger. Further, its protracted use irritates the meatus. After syringing, a few drops of an alcoholic solution of perchloride of mercury are to be left in the ear. "Under no circumstances is the canal to be occluded with "cotton," and "powders should not be introduced into the canal to check an "otorrhœa." *A. J. Hutchison.*

**Fridenberg (New York).**—*Latent Mastoid Disease.* "Med. News," Oct. 24, 1896.

IN a paper read before the Fifth District Branch of the New York State Medical Association, the author draws attention to the frequency of cases of latent mastoid disease, where the symptoms have either been so slight, or even absent, that no suspicion of the very considerable mischief existing in the mastoid has been entertained, although carious destruction may have been going on for months or even years. He read the notes of several cases which had come under his observation as instances of this. In one instance where he removed a cholesteatomatous mass from a cavity in a sclerosed left mastoid, which appeared to have some connection with the semicircular canals, the patient had suffered from marked vertigo on any quick movement, the vertigo being from right to left. This persisted for two months after the operation, but then disappeared. *StGeorge Reid.*

**Fruitnight, Henry (New York).**—*The Importance of Early Diagnosis and Treatment of Inflammation of the Middle Ear.* "Med. News," Sept. 12, 1896.

THE author refers to the danger of allowing a purulent discharge of the ear to go on unchecked. He states that in a recent epidemic of measles in New York five per cent. of the cases suffered from middle-ear mischief, but by treating this in

<sup>1</sup>"Anatomo-Patholog. and Bacteriological Examinations of the Nasal, Naso-Pharyngeal, and Tympanic Cavities of New-Born and Young Infants," Idem, May, 1896.

time not a single case was left uncured. He approves of the application of an alcoholic solution of boracic acid after the ear has been thoroughly cleansed ; in his experience the insufflation of powders has acted prejudicially, interfering with the cleanliness and increasing the pain. He relieves the pain in the early stages by the instillation of three or four drops of a five per cent. solution of cocaine.

*St George Reid.*

**Hengst.**—*Acute Median Otitis, complicating Typhoid Fever.* "Pratique Méd.," Aug. 12, 1896.

IN order to gather statistics on this subject the author sent circulars to a number of medical men, asking the following questions :—

1. How many cases of typhoid fever have you treated ?
2. In how many of these has otitis media occurred as a complication ?
3. At what period in the fever ?
4. Was the mastoid affected ?
5. Result of the otitis : have the auditory troubles been cured ?
6. Have large doses of quinine been used ?

The total number of cases placed at his disposal was one thousand two hundred and twenty-eight ; and in seventy-eight of these there had been purulent otitis media. Cases of earache, lasting for a short time, with slight deafness for several days, were left out of account. The otitis set in between the end of the second and the fourth week. At this stage the patient is generally semi-comatose, the circulation is feeble, and the naso-pharynx is filled with thick mucus which he is unable to expel. The Eustachian tube is full of this, and the otitis is a result. To the fourth question only negative replies were received. One of the author's own cases, however, had acute mastoiditis. As to prognosis, all the replies were favourable. The question as to quinine was asked because of the congestion of the middle and internal ear it is known to produce when taken in large doses. The majority of the replies were negative. One correspondent, who had seen one hundred and seventy-five cases of typhoid, five of which were complicated with otitis, reported that he usually gave large doses of quinine during the hyperpyrexia. Others stated that they used the drug as a tonic, in doses that were too small to affect the hearing. The author afterwards discusses the causes, symptoms, and treatment of this complication.

**Hogg, G. H.** (Tasmania),—*Sarcoma of the Base of the Skull, involving the Ear.* "Australasian Med. Gaz.," July 20, 1896.

A BOY, aged four and a half years, was brought to the author on account of an inequality of the pupils, which had been noticed for about a fortnight. The left pupil was contracted, and reacted neither to light nor accommodation. It could be fully dilated with homatropine ; vision was good ; otherwise the child was well, with the exception of occasional listlessness. A doubtful history of earache without discharge was elicited, but on which side was not known.

Sixteen days later there was fully developed facial paralysis. He had vomited a little two or three times after food. No headache was complained of, and the general health was good. Examination of the ears revealed nothing abnormal ; with the ophthalmoscope commencing optic neuritis was detected. The skull was now trephined and the cerebellum explored, but nothing was found.

A month after the operation there was slight bulging through the operation wound, which had quite healed ; and in the left eye a good deal of conjunctivitis. A few days later a corneal ulcer formed and vomiting again set in. These indications of intracranial pressure gradually increased.

About three weeks later the left mastoid was opened on account of tenderness

over it, and a polypus was removed from the left ear. For some days he seemed to improve; then he gradually grew worse, became comatose, and died within a fortnight after the last operation.

The *post-mortem* examination revealed an extensive growth at the base of the brain. It seemed to have sprung originally from the body of the sphenoid. It had invaded the basilar process of the occipital bone, and the apex of the petrous portion of the left temporal bone, through the latter gaining access to the tympanum. The bones affected were soft, and the surface of the pons was adherent to the mass. The tumour proved to be a round-celled sarcoma. *A. B. Kelly.*

**Love, J. Kerr.**—*Exploration of the Mastoid Process. Case of Sigmoid Sinus Thrombosis—Recovery.* "Glasgow Med. Journ.," Sept., 1896.

THE author considers the hammer and chisel rapid but not safe; the burr much safer, but very slow. In searching for the antrum he first (*i.e.*, after reflecting periosteum) uses an instrument like a joiner's brog, with shoulders fixed on the stem. The instrument is made in different sizes, the distance from point to shoulder increasing one eighth of an inch with each size. With this instrument the antrum is usually found in two or three minutes. Thereupon the burr should be used. "The first perforation should be made in the line of the attachment of the auricle, about half an inch above the external border of the external meatus. The antrum may generally be found at a lower level than this, but the subsequent drilling towards the tympanic cavity is more difficult."

M. M., aged nineteen, otitis media purulenta of eight weeks' duration. A fortnight before admission to Royal Infirmary the discharge had lessened or stopped; swelling and pain over mastoid came on. On admission, 9th January, the mastoid swelling was at once incised; on 17th the antrum was opened and formed into one cavity with attic and tympanum. Later on albumen, blood, and granular casts appeared in the urine, still later came optic neuritis, sluggish and dilated pupils, epigastric pain, vomiting, diarrhoea, motor symptoms, etc. On 31st January the sigmoid sinus was opened; blood flowed very lazily from it, but as the tissues round about were healthy it was not further interfered with. The temporal region was then trephined and dura opened, but nothing abnormal found. The wounds healed well, the motor symptoms at once disappeared, and the fever, etc., gradually passed off. It appeared that the use of iodoform in the dressing of this case had an unfavourable effect on the temperature. *A. J. Hutchison.*

**Ridley, Walter.**—*Operation for Lateral Sinus Thrombosis.* "Brit. Med. Journ.," Nov. 21, 1896.

THE report of a case occurring in a young man with mastoid disease, in which recovery followed the removal of a foetid purulent clot from the jugular vein throughout its course in the neck, and the draining of a subdural abscess.

*Ernest Waggett.*

**Rimini, E.**—*A Case of Pyæmia due to Otitis Media Acuta. Paper read before the Trieste Medical Society, March 24, 1896.* "Bollet. delle Malatt. dell' Orecch.," Settembre, 1896.

THE author, in presenting a case occurring in a child of seven years, dwells upon the rarity of pyæmic infection complicating acute middle ear affections. In reviewing the entire literature, he is but able to collect sixty similar cases. Naturally, in this category, he excludes all instances of pyæmia due to or arising during the course of chronic suppuration of the middle ear. In the case above mentioned, notwithstanding trephining of and removal of several thrombi from the transverse

sinus, consecutive pyæmic abscesses of the left femoral-iliac articulation, and an intervening attack of icterus, complete recovery followed after three months.

*Jefferson Bettman.*

**Somers, L. S.**—*Aural Herpes.* "Amer. Med. Surg. Bull.," Oct. 31st, 1896.

AFTER some remarks on this condition, the author quotes the following case:—

S. A., male, aged sixteen. After exposure to cold had an attack of acute coryza, with considerable prostration, fever, and a peculiar burning, stinging pain in right ear. The neuralgic pain continued for three or four days, then there appeared an eruption of from twelve to fourteen small vesicles filled with turbid fluid, covering an area of about 10 millimètres square, just inside the meatus. At this time the constitutional disturbance had passed off, all except the pain. Under the use of laxatives and the local application of yellow oxide of mercury in lanoline, the pain quickly passed off and the eruption faded away.

The patient had never suffered from any affection of the ear before, nor from herpes labialis.

Treatment must be constitutional and local.

The first consists of salines, regulation of diet, antipyretics, etc. Locally, before the appearance of the vesicles, the pain may be mitigated by the use of cold (ice water, or lead and laudanum lotion); when the vesicles have appeared, every effort must be made to prevent rupture. When the condition recurs, counter irritation should be applied to the affected nerves.

*A. J. Hutchison.*

**Walker, Secher.**—*Cerebellar Abscess complicating Mastoid Disease.* "Brit. Med. Journ.," Nov. 21, 1896.

A REPORT of a case in which cure resulted after draining of an abscess in the left lateral lobe of the cerebellum, occurring in a boy of fourteen with mastoid disease. The author believes this to be the eleventh successful case recorded.

*Ernest Waggett.*

## Correspondence.

*To the Editor of the OTOLOGICAL DEPARTMENT of the JOURNAL OF LARYNGOLOGY.*

SIR,—I was much interested in your abstract in the JOURNAL OF LARYNGOLOGY for February, 1896, p. 70, of an article by Dr. Lannois, of Lyons. The case reported was one in which there had been found a rupture of the membrana tympani after hanging. The opinions of several authorities as to the probable cause of this condition were cited, and the conclusion was reached that the proper explanation had not yet been made.

The theory ascribed to Zaufal, viz., sudden increase of the intra-tympanic air pressure caused by the forcible propulsion of air through the Eustachian tubes by the violent upward protrusion of the tongue, seems, indeed, most improbable, and for the reason given, *i.e.*, the necessary escape of such air pressure through the nostrils.

As a more rational explanation of this condition I would suggest the following as the probable cause:—

In the act of hanging the knotted portion of the noose (in the case reported by Dr. Lannois the knot was probably replaced by a buckle) comes as a hard mass suddenly, and with great violence, in contact with the angle of the jaw, and thereby the ramus of the inferior maxillary bone is driven against the floor and anterior wall of the bony auditory canal, impinging most forcibly by its internal and highest articulating surface. A fracture of this comparatively thin plate of the temporal bone is the result. The fracture extends to and includes the membrana tympani. The mucous membrane of the auditory canal may not be broken, and there is therefore little, if any, hæmorrhage. The lesion in the ear drum would naturally assume the oval shape described, because of the action of the fibres constituting it. At the junction of the membrana tympani with the floor of the osseous canal no separation of the edges would be noticeable, supposing the fracture to be a simple one. In the middle portion of the drum, however, separation of the edges takes place on account of the retraction caused by the circular fibres. The frequency of this injury, and its extent, of course, vary with the difference in the violence inflicted and with the resisting power of the bones involved. The occurrence of this perforation of the membrana tympani is, I think, analogous to the rupture of the drum from fracture of the skull.

In the list of authorities I have consulted I find hanging as a cause of perforation of the ear drum mentioned by Goram Bacon ("Burnett's System of Diseases of Ear, Nose, and Throat," Vol. I., p. 255), and Urbantschitsch ("Ohrenheilkunde," p. 152), but in neither case is any theory as to the method of its causation given.

Very truly yours,  
WM. LINCOLN,  
Instructor in Laryngology, Otology, and Rhinology  
at Western Reserve Medical College.

### NEW INSTRUMENT.

DELIE'S NASAL GOUGE (Meyer & Meltzer, 71, Great Portland Street, W.).

This is a chisel for nasal spurs, for a full description of which see JOURNAL OF LARYNGOLOGY, Vol. XI., No. 4, p. 207.



## REVIEWS.

**Lermoyez.**—*Traitement des Maladies des Fosses Nasales, des Sinus de la Face, et du Pharynx Nasal.* Par le Dr. MARCEL LERMOYEZ, Médecin des Hôpitaux de Paris. ("Treatment of the Diseases of the Nasal Fossæ, the Facial Sinuses, and the Naso-pharynx." By Dr. MARCEL LERMOYEZ.) Two volumes, with 146 engravings in the text. 393 and 420 pp. Paris, 1896. (Octave Doin.)

It is in every respect a pleasure to handle, peruse, and study the beautiful, readable, and instructive volumes in which Dr. Lermoyez has exposed his views on the subjects included in the above title. The readers of current special literature are well aware how for years the author has been studiously analyzing and formulating his opinions with regard to nasal pathology, and with what judicious appreciation he has received and tested the original observations of other authors, while adding many of his own or his collaborators'. The study and publication of monographs on the various sections of the subject form naturally the best preparation for the composition of a text-book, and it is obviously by this natural process that Dr. Lermoyez's present work has been evolved. The book is avowedly above everything else practical. It is therefore crammed with details (the personal and national bent of the author), but it escapes the fault usually characteristic of descriptions of details, namely, a lack of literary style which is apt to render them almost unreadable. Despite minuteness of detail, despite that elaboration of division and paragraphing which usually subordinates proportion to logic, the current of diction and exposition flows smoothly and clearly from beginning to end. In the first volume a full description of the principles and methods of illumination, anæsthetization, sterilization and disinfection, electrotherapeutics, and vibratory massage form the first part, the second part being devoted to methods of examination, cleansing, application of remedies, cauterization, operation, and finally to the special therapeutics of the individual diseases of the nasal fossæ properly so-called. The second volume deals with the diseases of the accessory sinuses and naso-pharynx. As a general anæsthetic (p. 32) the author is an advocate for bromide of ethyl for patients between three and sixteen years of age, admitting the impossibility of excluding a minimal amount of risk (p. 40). In regard to cocaine he contends for the avoidance of anything beyond the "dose maniable," two to three centigrammes for the middle ear, five for the nose, and ten for the larynx, the dose of the solution being poured out into saucer of watch-glass, so that the swab or brush may not be introduced into the bottle of solution (p. 53). Among the best anti-septic solutions for the disinfection of instruments which cannot be boiled he classes pheno-salyl in a one per cent. solution (p. 62). As a rule he proscribes the syphon douche, and recommends the *seringue anglaise*, Higginson's enema syringe. The ritual of nasal operations is rigidly

laid down, and there is no question that he is right in attributing success and failure to the more or less exact attention with which the details are carried out (p. 218). He makes considerable use of peroxide of hydrogen as a temporary styptic and cleansing agent. The dislocations, deviations, and thickenings of the septum are clearly distinguished, classified, and dealt with, the sawing operation being evidently the favourite method of the author for the last-mentioned conditions. He recommends the electrolytic method (for the detail of which he acknowledges indebtedness to Moure of Bordeaux) only in cases of extremely nervous patients, and on them he employs the bi-polar method. The choice of method is carried out according to principles clearly formulated on page 256. The resection of the anterior extremity of the middle turbinal finds favour under many circumstances, but, curiously enough, the details of the typical operation as devised by Grünwald are not given exactly as that author recommends. The incision with cutting forceps preliminary to the application of the snare is, in our opinion, absolutely essential to the best result.

The author is, perhaps, at his best in the discussion of such diseases as hay fever and nasal reflexes, in which his vast experience as a general physician accompanies and checks in a wholesome way his enthusiasm as a specialist. At the same time we do not know any better account of ozæna, nasal syphilis, and nasal tuberculosis than is found in this book.

In the section on diseases of the sinuses the subject is handled with equal felicity and exhaustiveness in eighty-five pages. The value of the different signs are very well brought out by the trifold classification, as "signs of presumption," "signs of probability," and "signs of certainty," the various forms of examination by means of rhinoscopy, probing, transillumination, exploratory irrigation, and exploratory puncture being well described in their relation to the different sinuses. The external operation for chronic empyema of the frontal sinus as methodized by Luc is strongly advocated, but we should like to have seen an appreciative reference to the method of exploratory and therapeutic opening of the frontal sinuses which we owe to Mayo Collier, and which is so valuable in cases where there is doubt as to which—if not both—of the frontal sinuses is responsible for the patient's suffering. It is interesting further to note the limitation of the term "latent" as applied to empyema of nasal sinuses. This term is of course only a relative one, and what was formerly latent is now very obvious. There still remain certain cases in which exploratory punctures or *post-mortem* examinations have shown us existence of empyema of the sinuses which have never manifested themselves by any symptoms whatever (p. 87), and these are the cases to which he applies the term. The author has treated the tumours of the sinuses rather sparingly—possibly from an anxiety to omit everything but what was of practical therapeutic value; but we would certainly have been benefited by a somewhat longer account of this important part of the subject.

In the chapters treating of diseases of the naso-pharynx, the same standard of detail is maintained as in those that we have already reviewed. And if there were one thing that would make the work absolutely perfect of its kind, it would be an alphabetical index such as we are accustomed

to in English or German treatises. Dr. Lermoyez has shown himself to be so cosmopolitan in his views that we trust that in the second edition of his book, which it is absolutely certain there will be a steady demand for, he will see fit to make this addition, even though it is a departure from the traditions of French scientific literature.

The tyro on rhinology will find in Dr. Lermoyez's work a description of all the difficulties he is likely to meet, and the modes of avoiding them ; the busy specialist will find the most recent observations condensed and analyzed for his perusal ; and the teacher will find the heads of the subjects classed and formulated in such a way as to render the conveyance of instruction to pupils easy, clear, and acceptable. *Dundas Grant.*

**Heymann.**—*Handbuch der Laryngologie und Rhinologie.* 3 und 4 Lieferung. Wien : Hölder. 1896.

THE third and fourth parts of the "Manual of Laryngology" are taken up almost entirely with Prof. Mihalkovics' article on the anatomy of the nose, and with articles by Prof. Zuckerkandl and Dr. Paul Heymann on the anatomy and histology of the larynx and trachea.

The first of these writers treats in a most minute and comprehensive manner of the descriptive and comparative anatomy of the external nose, the nasal fossæ, and the accessory cavities. After the great work of Zuckerkandl on the same subject, one does not expect the author to have much that is new to bring before us. But Dr. Mihalkovics, while making the fullest use of Zuckerkandl's work, has also made numerous dissections for himself and formed his own opinions. On only a very few points, however, do the two writers disagree. As an example we may take the question of deviations of the nasal septum. Many clinical observers have been unable to agree with Zuckerkandl as to the non-occurrence of septal deviation under the age of seven. Mihalkovics comes to their support with two observations of deviated septum in embryos at the third and fourth month. The bearing of these observations upon some recent theories as to the causation of septal deformities is obvious.

Another interesting question is raised by the author's observations on arrested development of one or more of the turbinated bones. Zaufal and Hyrtl, as is well known, held that the lower turbinateds are often imperfectly developed, and the former founded on this fact his theory as to the causation of atrophic rhinitis (ozæna). Mihalkovics finds that a similar arrest of development often occurs in the other turbinateds. The upper turbinated he found not infrequently to consist of only a fine ledge of mucous membrane, and in one case a fold of mucous membrane was all that represented the middle turbinated. As there was no sign of atrophy anywhere else in the nasal cavities the author cannot agree with Zuckerkandl in regarding such cases as due to an atrophic rhinitis.

In discussing the function of the accessory cavities, with regard to which so many theories have been advanced, the writer expresses the opinion that the solution of the problem is to be found in their comparative anatomy and developmental history. The frontal, sphenoidal, and maxillary sinuses were at first developed, he thinks, to find room for the extending olfactory organs of some of our very remote ancestors. With

us only the pneumatic cavities remain to give trouble by becoming the seat of empyemas. The ethmoidal cells are peculiar to man and the anthropoid apes, are unconnected with the sense of smell, and only serve the purpose of filling in and lightening the space between the nasal cavities and the orbits.

An observation as to the structure of the mucous membrane at the anterior part of the cartilaginous septum, has an important bearing on the question of nasal bleeding. At this point Milhalkovics found high and fine papillæ with wide central veins, such as are present in the mucous membrane of the gums. He did not find in this region the form of cavernous tissue which Kiesselbach has described, but only very large veins and capillaries.

Prof. Zuckerkandl's article on the anatomy of the larynx and trachea is written with all the thoroughness and lucidity of style which characterize the works of that distinguished anatomist. He enters minutely into the description of the cartilages, joints, and muscles of the larynx, illustrating his text with numerous beautiful wood-cuts from his own dissections. One of the most instructive engravings is from a dissection of what he terms the crico-thyro-arytenoid muscle in a bass singer. Under this term he includes the lateral crico-arytenoid, and the internal and external thyro-arytenoid muscles. These he regards as one muscle, which can only artificially be separated into three.

On the question of the presence of glands in the vocal cords, Zuckerkandl is in entire agreement with Fränkel. It is all a question of the meaning of words. No one can deny the occurrence of glands in the vocal cords, if we include in that term the vocal muscle and its investing mucous membrane (*stimmband*). But if we limit the term to the elastic fibrous tissue (*stimmsaite*), then the cords do certainly not contain glands.

The author takes his description of the laryngeal lymphatics from Luschka's work, and, in regard to the nerve distribution, accepts the views of the older anatomists, without even referring to the work of Exner and others on this subject.

Dr. Heymann's paper on the histology of the larynx exhibits the same thoroughness of treatment as we find in the foregoing articles, and is illustrated by a number of excellent drawings of microscopic specimens.

*Middlemass Hunt.*

*The Private Sanatoria for Consumptives, and the Treatment adopted within them.*

By Dr. A. VON JARUNTOWSKY. Translated, with permission of the Author, by E. CLIFFORD BEALE, M.A., M.B. Cantab., F.R.C.P. (London: The Rebman Publishing Company.) Crown 8vo. 46 pages.

WHEN the diagnosis of pulmonary tuberculosis has once been settled—and the earlier the disease is discovered the greater is the chance of cure—the question arises, Shall the patient be told the nature of his disease or not? Even now this is sometimes a matter on which there may be differences of opinion; but if in the patient in question the proper treatment can be furthered and the chance of success made more

probable by his knowing what he suffers from, there can be only one opinion, and that is to let him know. He should then be taught how to live so that his general health be improved and his tissues rendered able to successfully resist the bacilli. In this respect the advantages of residence in a properly conducted sanatorium are undeniable, and it is only owing to the unwillingness of most English patients (who have any means of their own) to submit to strict discipline that private sanatoria for phthisis in England are still practically unknown. The little book translated by Dr. E. C. Beale gives a clear and concise account of the principles of treatment at private sanatoria for phthisis, such as those of Goerbersdorf, Falkenstein, Hohenhonuet, etc., and may be most cordially recommended to English readers.

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## Obituary.

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### J. MICHAEL.

IT is with feelings of profound sorrow and regret that we announce the death of our late colleague, Dr. J. MICHAEL, of Hamburg, at the early age of forty-nine years. He died suddenly at Hamburg early in last month (6th). He had been connected with this JOURNAL since its foundation eleven years ago, and had always devoted himself to its welfare, being a most regular and indefatigable contributor.

Previously to settling in Hamburg, Dr. Michael was assistant at the clinics of Profs. Schnitzler and Politzer, at Vienna. He had, however, already devoted considerable time to the study of his specialities in Berlin. He was a contributor for laryngology to "Guttman's Year Book," besides which he contributed many papers of scientific and practical importance to the German press which space does not permit us to mention.

*R. Lake.*

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## Editorial Note.

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IN Mr. Lennox Browne's article on the antitoxin treatment of diphtheria in the number of the JOURNAL OF LARYNGOLOGY for December, 1896, third line from the foot of page 314, the words "20,000 units," should read "10,000 units."

We are indebted to Mr. Lennox Browne for having drawn our attention to the above error, which originally occurred in our abstract of the report of the "Lancet" commission on the subject on page 294 of the JOURNAL OF LARYNGOLOGY for November, 1896. We venture to believe that such errors have been of the greatest rarity in our pages; but we

most cordially beg that readers will direct the attention of the managing sub-editor, or of the editor of the section, to any which may have escaped notice, so that, in the interest of scientific and historic accuracy, we may insert a correction without delay.

## THE

JOURNAL OF LARYNGOLOGY,  
RHINOLOGY, AND OTOTOLOGY.

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**ANGINA EPIGLOTTIDEA ANTERIOR.**

By Dr. W. P. MEYJES, M.D. (Amsterdam).

As but very few cases of angina epiglottidea anterior have been published hitherto, I think the following case may be of interest to the readers of this journal.

Mr. S., aged forty-one years, consulted me on November 5th, 1896, complaining of sore throat, painful deglutition, and choking when he attempted to swallow milk or soup. The pain darted to the right ear. He became feverish, especially in the afternoon. Altogether he felt very weak and miserable. His illness had begun with a slight cold some weeks before, which had not prevented him from attending to his business. His appetite, however, was quite gone, and his head ached very much. His voice remained clear, and although he had suffered for many years, from time to time, with acute inflammation of the throat, during none of these attacks had he ever felt so wretched. He had never contracted syphilis, and there was no question of tuberculosis. The general impression the patient gave me was that his condition was very grave. He looked haggard, feverish, and leaned back in his chair.

On examining his pharynx nothing of importance was seen excepting slight redness of the plicæ palato-pharyngææ, especially on the right side. As soon as I employed the laryngoscope, however, I saw the cause of his trouble. The anterior surface of the epiglottis was very red and extraordinarily swollen, almost completely hiding the fossæ glosso-epiglotticæ. Movements of the tongue caused great pain. The circumference of the epiglottis was increased, while both the ligamenta ary-epiglotticæ were swollen. The posterior surface of the epiglottis was slightly red, also the chordæ vocales veræ. I was not astonished that the patient choked, for the action of the epiglottis in closing the introitus laryngis during deglutition was impeded by the swelling of its anterior surface.

I ordered absolute rest, aqua laxativa, ice internally and externally, and, last but not least, the use of an iced spray of one-third per cent. watery solution of ichthyol every quarter of an hour. I am acquainted with no drug that diminishes redness and swelling so quickly. I have used it during the last six years in all cases of acute inflammation. It is free from the slightest irritation, and, although the smell is not agreeable, patients soon get accustomed to it if prescribed for the first few days not stronger than one-fourth to one-third per cent.

On the following day the patient was already much better; the pain had lessened, and the fever abated. On examining the larynx I found the epiglottis less swollen and the redness diminished. Scarification—which I intended to perform had the symptoms continued or increased—was now unnecessary, and in about a week only slight infiltration remained at the base of the epiglottis. The patient was told to continue the ichthyol spray (one-half per cent.), but without the addition of ice. Since then the last sign of inflammation has passed off.

This form of oedema laryngis, strictly limited to the epiglottis, especially its anterior surface, has been termed *angina epiglottidea anterior* by Michel, of Cologne ("Centralblatt für Medicinische Wissenschaften," 1878, No. 2), who first described cases of this kind. He found the pharynx almost unaffected, and without laryngoscopy a correct diagnosis could not be made. He described six cases, two associated with swelling of the ary-epiglottic folds, one with hoarseness due to swelling of a vocal cord, and two complicated with angina Ludovici, the inflammation having passed to the subcutaneous tissues.

When not detected early the life of the patient is in great danger, owing to the possible extension of the process. In the "Nederlandsch Tydschrift voor Geneeskunde," 1878, p. 462, Pel calls attention to this remarkable condition, describes briefly Michel's cases, and finally pleads for a laryngeal examination in every case in which the patient complains of sore throat when nothing to account for this is discovered in the pharynx.

Moritz Schmidt ("Die Krankheiten der oberen Luftwege," S. 153) describes this disease as often associated with, or preceded by, angina acuta simplex. He thinks that it is always caused by an injury or inflammation of the lingual tonsils (S. 232). In my case the illness may have been ushered in by angina, as the patient suffered from such attacks several times a year; it is remarkable, however, that on no previous occasion were signs observed of the epiglottis being involved.

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## SOCIETIES' MEETINGS.

### THE LARYNGOLOGICAL SOCIETY OF LONDON.

*Annual General Meeting, January 13th, 1897.*

FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

Dr. MACINTYRE, F.R.S.E. *Series of X Ray Photos.* Demonstrated by Dr. SEMON.

One of the large photographs shows the thorax, arms, etc., of a man aged thirty. The second (in which two spots representing the buttons of the clothing will be seen) is the thorax with the upper extremities of a young man aged twenty. In both photographs some of the viscera are faintly outlined.

The third photograph is not of interest from the laryngological standpoint, but was made a test of penetration when experimenting in the thoracic region. It represents a case of hip-joint disease, and in it you will see the spine, pelvis, etc.

The case of the heart is from the living subject, and was the first photograph of this organ obtained by Dr. Macintyre. Since then he has photographed many abnormal conditions, mostly in the direction of hypertrophy, and in one case an aneurism in the thorax. One of these abnormal conditions of the heart will be seen in the photograph marked "Enlargement of the heart in a case of pneumonia." At the time the photograph was taken the heart was beating rapidly, and respiration was very quick. These movements in taking a picture had to be contended with, and as it was at an early date of the work the exposure took five minutes.

The larynx is just the same as the one in the small album, but it is interesting in the sense that it was photographed through the whole thickness of the neck, showing the base of the tongue, hyoid, arytenoid, epiglottis, pharyngeal space, spine, etc.

The photograph of an anatomical specimen of the larynx has a pin which has been placed therein purely for experimental purposes.

The photograph of the coin in the œsophagus is the one referred to by Sir Joseph Lister in his address at Liverpool.

The instantaneous photograph representing the bones of the fingers was taken in the fraction of a second by means of a mercury interrupter, as described in the "Lancet" this year.

All these photographs were taken with a ten-inch spark coil and the focus tube.

Dr. PERMEWAN. *A Case of Bilateral Abductor Paralysis in a Child.*

L. S., aged five, was admitted into the Liverpool Children's Infirmary on December 16th, 1895, complaining of loud breathing at night, and

occasional spasm. Enlarged tonsil and post-nasal adenoids were removed with no improvement. On February 4th, 1896, paralysis of abductors of both cords was found. On May 10th, urgent dyspnœa supervened, and necessitated tracheotomy; and she has worn the tube ever since. The condition of the cord is still the same, and the voice remains normal. There are no signs of disease in neck or chest. There was no history of diphtheria or sore throat, and no signs or symptoms of brain disease.

The cause of the paralysis is not clear; probably there has been some affection of lymphatic glands, which has implicated both recurrent laryngeal nerves. Niegel's case was due to implication of the nerves in inflammatory tissue.

Dr. PERMEWAN. *Drawing of a Case of Tubercular Ulceration of the Larynx; cured.*

Mr. W. R. H. STEWART. *Case of Laryngeal Obstruction.*

The patient, a female aged forty-four, kindly sent by Dr. Scott Gibson. Breathing had been bad for eight or nine months; rapidly had become worse, the last two months especially when lying down. Was confined of her tenth child five weeks ago; nine children living, all exceptionally healthy; one died from pneumonia. Patient is very anæmic, and has progressive muscular atrophy of one hand. There is no obtainable history of tubercle, malignancy, syphilis, or injury.

Mr. BOWLBY thought it was simple inflammatory subglottic swelling.

Dr. F. SEMON said there was fixation of the left vocal cord, a good deal of subglottic swelling, and he thought there was a foreign body of some kind subglottic; it might be only inspissated mucus. He mentioned a case he had some years ago at St. Thomas's, where a ventriloquist had "swallowed his call" some time before, and had forgotten the fact. He asked Mr. Stewart to let the Society hear of the further history of the case.

Dr. STCLAIR THOMSON suggested albuminuria. Dr. PERMEWAN suggested syphilis. Dr. JOHNSON HORNE asked if it might be tubercular.

Mr. STEWART said he would certainly let the Society know of the further development of the case. He did not think albuminuria had anything to do with it, as the dyspnœa had been gradually getting worse for eight or nine months, and the urine was free from albumen a week ago. He thought the fact of there being nine healthy children and no history was against the theory of syphilis, and there was also no history of tubercle. The patient had been on arsenic for a week, and seemed greatly improved in her general health.

Mr. W. R. H. STEWART. *Case of Curious Malformation of the Nose.*

Patient, a man aged twenty-five, was sent to Mr. Stewart, at the Great Northern Central Hospital, with a wish for something to be done, if possible, to relieve him of what to all appearances was a bifid nose. He stated that, when quite a baby, a large tumour was removed from the nose, and he never remembers being any different from what he is at present.

Mr. WAGGETT pointed out that the case was not one of duplication

of part of the organ. The mesial nasal process in the embryo was bilateral in character, consisting of two prominent lateral portions separated by a mesial groove. Normally this groove was obliterated by the approximation and coalescence of the lateral portions, which were ultimately represented by the philtrum columella nasi and internal boundary of each anterior naris. In the negro type the mesial groove in a measure persisted at the tip of the nose. In the present case an operation scar corroborated the history of the removal of a tumour in infancy. Dermoid inclusion cysts, though rare, were found in the middle line of the nose. The speaker suggested that at an early date in foetal life such an inclusion cyst was formed, and that this presented a mechanical obstacle to the normal coalescence of the prominent extremities of the globular processes, *i.e.*, the lateral portions of the mesial nasal process.

Dr. BENNETT. *Case of Nasal Obstruction.*

Miss M., aged nineteen, has suffered from obstruction of the left nostril since last summer. There have been no other symptoms. She came under observation last October, and a growth was found on the septum, the floor of the nose, and on the inferior turbinal. The growth was supposed to be of a tuberculous nature. A portion of the growth from the septum was removed at the end of the year, and examined microscopically, with the report that the growth was a squamous epithelioma. The appearance of the growth still makes one hesitate to accept the diagnosis, and further microscopical examination will be made.

Mr. P. DE SANTI. *Case of Pharyngeal Pouch.*

A man, aged thirty-three, sent up by Dr. Eliot of Southampton, for a swelling in the right submaxillary region, had had a swelling in the neck since the age of fifteen, but it had never caused him much trouble. He has twice had some hæmorrhage from the mouth, but it was not severe. At one time there was slight swelling on the left side of the neck.

On examination there is a visible swelling beneath the right half of the inferior mandible in practically the digastric triangle. On the patient taking a deep breath and blowing out his cheeks, the "pouch-like swelling" in the neck becomes tightly distended like a bladder blown up. The filling up of the pouch is instantaneous, and the size that of a moderate-sized fist. On percussion, when the swelling is distended, the note is quite dull. On examination of the mouth no opening whatever can be found into the apparent pouch. On examination with the finger there seems a good deal of loose tissue between the floor of the mouth and the external surface of the swelling. At no time has there been any entry of food or liquids into the swelling.

Mr. de Santi stated that the case was one of great rarity, and he was desirous of a diagnosis. In no way did the swelling resemble a real pharyngocele. In the only case he had ever seen of pharyngocele the swelling was on the left side, commenced at the beginning of the œsophagus, and contained food stuff which could be squeezed out.

The swelling in the man exhibited was in all probability of congenital origin, and possibly connected with a branchial cleft or some foetal

structure. All he could compare it to was the pouch found in much the same region in some monkeys.

Mr. BOWLBY suggested that it was not a pouch containing air, but veins.

Mr. WAGGETT suggested that Mr. Bowlby's view of the case might be tested by transillumination. With a small lamp in the mouth, the patient would be able to distend the tumour in the usual manner. If it was of a venous character the increased amount of blood traversed by the light would cause a deepening of the shadow as the tumour increased in size. Conversely, the stretching and thinning of the walls of a true air pouch on distension would diminish the opacity of the tumour.

*Pathological Specimens.* Shown by Dr. KANTHACK.

(1) *Tubercular Ulcers of Larynx and Trachea.* (2) *Larynx from Case of Hæmorrhagic Diphtheria.* (3) *Epithelioma of Larynx.* The interest of this specimen is the circumstance that it occurred in a tuberculous patient, and was not diagnosed during life. (4) *Singers' Nodule.* Hardened and fixed in formalin. This specimen shows marked interstitial myositis, and disproves the glandular origin of those nodules. (5) *A Curious Intra-Laryngeal Growth,* removed from a woman aged sixty-seven years. The growth was attached by a broad base on the left side in the subglottic region, and the case will be published *in extenso* at a future date.

The PRESIDENT stated that as Dr. Kanthack had specially asked for his own views concerning singers' nodules, he could summarize his own experience (which in this class of cases had been considerable) to the effect that he had not the slightest doubt that the affection was of an inflammatory character. The mere fact that almost all his patients had recovered without any local treatment, under the influence of prolonged and complete vocal rest, was positive proof in favour of this. He had, however, not been aware that the inflammation actually extended to the *musculus vocalis*, and Dr. Kanthack's contribution certainly taught something quite new. It was not a little remarkable that most of the patients he had seen had been taught the *coup de glotte*, and it seemed very probable that this method of bringing the cords together with a snap was in many cases, to some extent, if not entirely, responsible for the production of the nodules. He had not dared to treat the nodules by operative interference except in one case, in which, by the application of the galvano-cautery, the high falsetto voice of a clergyman had been changed into a deep basso. He congratulated himself that this had not happened in the case of a soprano singer.

Dr. SEMON. *Case of Black Tongue.*

The patient was a gentleman aged about forty. A fortnight before the case had been most characteristic. There had been a large patch of enormously elongated, hair-like, inky black papillæ in the region of the papillæ circumvallatæ. Under the local use of a five per cent. ethereal solution of salicylic acid, mixed with a five per cent. collodion solution, and followed by an application of peroxide of hydrogen by means of

a plug of cotton wool applied to the affected region several times a day, so much improvement had resulted that only the traces of the affection were still visible. This plan had been recommended by Unna, of Hamburg.

Mr. WAGGETT inquired if it was not usual for this rare condition to run in cycles with alternating appearance and disappearance, the latter being spontaneous. The apparent striking success of the treatment mentioned might be explained in this way.

Dr. STCLAIR THOMSON for Dr. Ernest Brown (Montreal). *A New Nasal Snare.*

The chief features were that the instrument has no springs or ratchets. The rack, which forms one side of a triangle upon which a pulley runs, gives a loop of considerable length. The wire can be drawn home with great rapidity, or, if desired, the loop could be taken in very slowly by using the screw and fly nut. The instrument is made of metal and simply constructed.

Dr. Thomson drew attention to the great strength of the snare, and the advantage over some others of working noiselessly.

Dr. DUNDAS GRANT. *A Wrist-Easel with Tracing Tablets for Laryngoscopic and other similar Drawings.*

Consists of a small metal frame about two by three inches, fixed to left wrist by a metal clip, which is easily attached. In the frame-can be placed drawings of the conventional outlines of the normal larynx, the tympanic membrane, the nasal cavities, etc. Over the drawing is placed a sheet of semi-transparent tracing paper, held firmly by means of a metal frame. The observer, even if comparatively unskilled in drawing, can thus trace a representation of the diseased condition without the trouble of laying down his instruments. The remaining outlines can either be traced at once or at a later period. By means of this apparatus, drawings may be made with the least possible inconvenience to the patient or the observer, and with the minimum tax upon the artistic skill of the latter.

Dr. J. MIDDLEMASS HUNT. *Microscopic Specimen of an Early Epithelioma of the Vocal Cord, and a Drawing of the Laryngoscopic Appearance before Operation.*

The patient, a man of fifty-six, had been slightly hoarse for about a year. Laryngoscopic examination showed marked congestion of left vocal cord, and on its edge, in the anterior third, was a small, white, flat papilloma, which seemed to invade rather than grow from the surface of the cord. There was perfect movement of both cords in phonation and inspiration. The growth was diagnosed as malignant from (1) its white colour, (2) its invasion of the substance of the cord, (3) the soft ulcerated appearance of its surface, (4) the congestion of the cord on which it was situated, (5) the age of the patient. Thyrotomy was performed after a course of iodide of potassium, and the left cord excised. The growth, which was no larger than a millet seed, presented the microscopic

characters of an early epithelioma. The patient is now well, and has an excellent voice, six months after the operation.

Dr. P. WATSON WILLIAMS (Bristol). *Unilateral Paresis of the Vocal Cord.*

The patient, first seen on November 12th, 1896, had a slight sore throat about three weeks before, and about two weeks before this he had lost his voice for one day, when it apparently got right again. In September he had had a severe and typical attack of acute lacunar tonsillitis, but the voice was quite unaffected.

The patient, a medical student, had been seeing cases of diphtheria, but was in good general health.

The voice was a little squeaky when the patient was first seen, and the laryngoscope showed that the left abductor was paralyzed and the adductor paretic, the healthy cord passing across the middle line in phonation. He was improved by local faradization and the administration of strychnine and salicylate of soda, so that in six days' time there was only a pure left abductor paralysis. By December 5th the abductor was only paretic, and since then the paresis had become still less marked.

Dr. Williams attributed the lesion to rheumatic neuritis, the patient having a history of subacute rheumatism in childhood, and some years ago he had a first attack of lacunar tonsillitis. There was not the slightest evidence of any intra-thoracic lesion, nor of syphilis, alcoholism, etc.

It was an interesting fact that the adductor recovered first, and Dr. Williams recalled another instance of this tendency to the early recovery of the adductor, as compared with the abductor, viz., that of a child, whose right vagus had been divided during an operation on the neck (the cut ends being sutured immediately), and in whom the adductor recovered in a few months, leaving only a pure abductor paralysis. The President had demonstrated the proneness of the abductors to succumb earlier than the adductors; these cases afforded clinical evidence of the converse sequence of events in recovery, viz., that the adductors exhibit a decided tendency to recover sooner than the abductors.

Mr. H. T. BUTLIN, F.R.C.S., was elected President for the ensuing year, and Drs. STCLAIR THOMSON and H. TILLEY Secretaries.

## SOCIÉTÉ DE LARYNGOLOGIE, D'OTOLOGIE, ET DE RHINOLOGIE DE PARIS.

November 13th, 1896. ("Arch. Int. de Lar., Otol., Rhin.," No. 6, Tome IX.)

President—M. LUC.

The PRESIDENT opened the proceedings with a preliminary address, which included sympathetic reference to his late colleagues in the Society—Jouslain, Wagnier, and Hélot.

Dr. LUBET-BARBON. *Reflections upon some Remote Results of freely Opening the Antrum and Tympanum.*

The speaker reported fifteen cases of successful mastoid operations in which a large epithelium-lined cavity persisted. In all the cases absolute cure had existed for at least six months. The operation had been undertaken on a variety of indications, whether as a means of saving life or for the cure of discharge intractable *per vias naturales*. According to circumstances, a "dry fistula" behind the auricle had been maintained or allowed to close up, but all the cases had the common characteristic of presenting a large cutanised cavity readily accessible to inspection. In cases where the posterior opening was not present, freedom of access *per meatum* was assured by longitudinal incision of the posterior wall of the membranous meatus and reflexion of the resulting flaps into the artificial cavity. This question of easy access was of essential importance with regard to the prospect of speedy cure, for the persistence of discharge in a great measure depended upon careful swabbing and cleansing after operation. But, apart from this, an estimate of the probable duration of discharge, subsequent to operation, was to be taken from the nature of the original lesion. Never had the author obtained cure without at least two and a half months' after-treatment. The more serious the lesion and the more inveterate the discharge, the greater was delay in cure likely to be. In cholesteatoma the delay had been thirty months; in fistula, twenty-eight months; general grave complications, twelve months. The question of papering, and that of the treatment of granulations, were to be considered. His results in respect to hearing agreed with those of other authorities. As a rule, hearing remained *in statu quo*; sometimes it improved; exceptionally deafness increased.

M. GELLÉ pointed out that the lesions of long duration took the longest to cure, an argument in favour of early operation.

M. LUC agreed with the author in regard to the long after-treatment. Nevertheless, such was always shorter than the duration of a lesion not operated on, and which had no tendency to cure. The existence of a fistula was alone sufficient indication for radical operation.

MM. MÉNIÈRE and LUBET-BARBON spoke of individual cases, and M. LUC spoke of the discrimination to be exercised with regard to healthy and unhealthy granulation tissue.

Dr. FURET. *Cerebral Symptoms of an Hysterical Nature, occurring in the Course of a Double Suppurative Otitis and simulating Septic Complications.*

The patient was a lady of thirty, of somewhat nervous temperament, with marked hyperæsthesia of the scalp of some years' duration.

She had a left otorrhœa of long standing, and to this was added an acute suppuration of the right middle ear. Some mastoid and supra-orbital pain was experienced, but without objective signs of mastoid complications.

About a month after the commencement of the acute attack, a sudden change took place. She became highly restless and semi-conscious, and seemed to be suffering with an affection of the speech. This was not a

true aphasia, but took the form of uttering words in incoherent disorder. She appeared to be unconscious of her defective speech, and made no effort at correction. No ocular or other paralysis was present. Hysteria was diagnosed, but as the case proceeded two new symptoms were added, namely, attacks of vomiting and a rise of temperature to  $38.4^{\circ}$ . The pulse rate was 96, and the patient seemed passing into a state of coma.

Cerebral complication was now suspected, and the diagnosis between abscess of the temporal lobe on the left side and diffuse suppurative meningitis was debated. The tongue was foul and the breath fœtid. Pending operation a gramme of calomel was administered. When seen next, after copious relief of the bowels, the patient was found completely restored, and in such a state that intracranial complication was out of the question.

Dr. COURTADE. *New Forceps for Adenoid Vegetations.*

The cutting edges of the ordinary patterns are apt to catch the mucous membrane, and, as the blades approximate, to pucker it up. Consequently the tissue is cut at too deep or too shallow a level, and not at a uniform depth throughout. In order to prevent this puckering Dr. Courtaude has devised forceps of the usual form, but with the cutting edge placed about a millimètre inside of the contour of the blades.

A discussion followed, in which M. COURTADE said that he employed the curette in addition to forceps, according to circumstances.

M. CHATELLIER urged the exclusive employment of the curette, to which proposition M. MÉNIÈRE demurred, claiming the advantages of the forceps, which he almost always used.

In reply to M. LUBET-BARBON, M. MÉNIÈRE commended the forceps as avoiding the necessity of a general anæsthetic.

M. RUULT, until 1891 a staunch adherent of the forceps, had since then abandoned them for the curette, employing only a slight degree of bromide of ethyl anæsthesia.

M. LUC attributed M. Ménière's adhesion to the forceps to his special skill in their use. It transpired that on the fifty occasions (out of three thousand four hundred operations) on which M. Ménière had employed the curette, he had made use of Lange's instrument.

M. SAINT-HILAIRE pointed out that this was a form which worked laterally.

M. LUC opined that if M. Ménière tried the ordinary Gottstein or Moritz-Schmidt curette he would very likely change his opinion.

Dr. A. COURTADE. *Hearing by means of the Cicatrices due to Cranial Trephining.*

The author quoted several cases in literature in which this phenomenon occurred, and in some of which acute hearing was referred to the cicatrix. In two cases carefully tested by the author, the tuning-fork was heard, when the ears were closed, no better when placed near the cicatrix than at an equal distance from an intact area of the skull.

In view, however, of the experiences of Larrey and others the matter required further research, as affording a possible means of relieving deafness otherwise intractable.

M. LUC knew of a case in which trephining was performed to this end, but without success.

Dr. BOUCHERON. *The Use of Antistreptococcus Serum in Chronic Streptococcus Rhinitis.*

There are several varieties of streptococcus rhinitis: that following *grippe*, erysipelas of the face and impetigo of the face, post-diphtheritic rhinitis due to streptococcus with or without the specific bacillus, post-scarlatinal and post-rubeolar rhinitis. The associated suppurations of the accessory cavities and of the ear come into the category of streptococcic lesions. The characters common to all streptococcus rhinitis are:—

(1) Muco-purulent discharge with crusts, and exhibiting streptococcus pure or associated with other organisms; (2) ulceration of the turbinates and often of the septum, with repeated epistaxis; (3) tumefaction of mucosa; (4) streptococcic lesion of the glands of the vestibule, with ulceration of the skin.

The antistreptococcus treatment is applicable to cases which are severe, and to those which are either chronic or recurrent.

The author finds that five centimètres of Marmorek's serum form an efficient dose, and that from four to six doses are required. The full dose of ten centimètres should be used in rebellious cases.

The first injection sometimes induces hypersecretion, but improvement is noticed after the second—discharge, crusts, and tumefaction diminish, and cicatrization of ulcers commences. Mucous secretion does not disappear so rapidly. Accessory sinus suppuration yields *assez rapidement* when streptococcus is present in pure culture. The general condition shows marked improvement. Staphylococcus militates against the good effects.

Dr. LICHTWITZ. *Sero-mucous Cysts of the Neck, Base of Tongue, and Larynx. Cure by Injection of Lugol's Solution.*

The report of a case of cyst occurring in a man of forty-seven. Aspiration of a cyst in the middle line of the neck removed a brown fluid containing cholesterine and hæmatin, and at the same time emptied another cystic tumour occupying the right glosso-epiglottic fossa.

Fearing a complicated system of ramification, the author rejected dissection in favour of injection. A single injection produced cure, which had now persisted a year, and might be looked upon as permanent.

Dr. PIERRE BONNIER. *Stereacoustic Hearing.*

Criticizing M. Paul Raugé's paper on this subject, read before the Society in May, 1896, the author took exception to the drawing of analogy between the functions of the eye and ear in this particular respect. M. Raugé appears to him not to appreciate the difference between the objective orientation (that is to say, the localization of the source of the sound) and the relief. M. Bonnier, moreover, has satisfied himself, *pace* M. Raugé, that when one ear is closed or diseased, the function of localization, though impaired, is by no means absent, and all sounds do not seem to come from a common direction. It is true that when one ear is put out of play the sense of acoustic relief is lost, just as

visual relief is impossible with one eye. But this appreciation of depth can only be gained in the matter of hearing by moving the head, and so displacing the relative position of the source of sound. Visual relief is another matter, and depends essentially on the convergence of the two visual axes, and on alterations in the direction of those axes dependent on movements of the eyeball. In the case of the ears, the auditory axes, so to speak, never can converge; and though the auditory field of one ear—by reason of being spherical—must necessarily overlap that of the other, yet by reason of the lateral disposition of the organs, and the intervening screen formed by the head, the clearest portion of one field corresponds to a dulled and screened-off portion of the other. In hearing we localize through the balance between the right-hand and left-hand perceptions. This gives only a rough idea of locality, and for more precise information we make use of movements of the head, to bring the source of sound into the most intense portion of the field of the ear most interested. Elsewhere the author has described the complex mechanism for orientation in each auricular field. This is a different matter from that of binocular vision, and M. Raugé seems to the author to have confounded that function of the ear which subserves the appreciation of direction with that of the eye which subserves the perception of relief.

M. BONNIER. *On a Case of Tympano-Spasm.*

The case was that of a girl commencing the study of singing. When singing certain notes in the lower portion of her register she always experienced the sensation of a light blow or shock in the right ear, accompanied by a sudden dulness of hearing and a sense of fulness in the labyrinth. Moreover, for the moment her "ear" failed her, and she was unable to discriminate between true and false singing of the notes in question. Examination revealed a normal ear, and neither patulence of the Eustachian tube nor autophonia accompanied the phenomenon. Doubtless the condition was due to spasm of the tensor tympani, and the sole cause of its excitation seemed to be the intrinsic resonance of the cavities of her ear, evoked by the production of certain notes or by their harmonics.

The tympanum always resonates in accord with particular notes, which vary with the individual, but, except in cases of autophonia due to tubal patulence, this as a rule produces no inconvenient result. In this present case a pathological irritability of the tensor mechanism was responsible for the trouble. The obnoxious method of teaching singers to produce their high notes in the post-nasal space, necessitates an unnatural tension of muscles associated physiologically and morphologically with the tensor tympani, and the false notes of many vocalists are to be attributed to the paracsis which undue tension of that muscle necessitates. Cramp, such as occurred in the present case, always makes the author suspect some impairment of the functions of the kidneys, such as renal insufficiency or want of equilibrium between tissue combustion and renal secretion. In this case a milk diet, accompanied with warm post-nasal douching, was followed in a few days by gradual cessation of the symptoms.

Dr. SAINT-HILAIRE. *Molar Tooth in the Maxillary Sinus.*

An anatomical specimen in which the wisdom tooth was found inverted into the sinus. Pus was present.

Ernest Waggett  
(Trans. and Abst.).

# FIRST SPANISH CONGRESS OF OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.

November 20th, 1896. (Special Report by Dr. RUEDA.)

President—Dr. VERDOS. Secretary—Dr. F. RUEDA.

## SECTION OF OTOLOGY AND RHINOLOGY.

(Continued from page 79.)

Dr. SIXTO BOTELLA. *Syphilis of the Mouth, Pharynx, and Larynx. Its Treatment by the Mixed Thermal Cure.*

In the thermal establishment of Archena, where the author has assisted Dr. Enriquez for five years, he has seen a number of cures effected by mercurial combined with hot sulphur water treatment. The latter facilitates the elimination of the metal through the respiratory as well as the cutaneous and renal apparatus, and so counteracts the tendency to acute mercurialism.

Dr. AURELIO ENRIQUEZ. *The Relation of Arthritic Temperament with Affections of the Nose, Pharynx, Larynx, and Bronchi.*

The author's use of mineral waters has led him to a study of the relations between the affections mentioned and certain forms of defective nutrition which come under the heading of arthritism.

Dr. GONZALEZ ALVAREZ (Madrid). *An Account of a Case of Deaf-Mutism.*

The case of a child of five who was deaf, and who could not speak a word. Catarrh of the Eustachian tube and of the tympanum was diagnosed. Treatment of a naso-pharyngeal catarrh, and restoration of the permeability of the tubes, re-established the power of hearing.

Dr. KARMINSKI. *Treatment of Common Chronic Suppurations of the Middle Ear.*

Rigorous antiseptics of the meatus and of the naso-pharynx is necessary in the treatment of all chronic otorrhœa. Swabbing with boric acid by Bezold's process has proved the best method in the author's hands, combined with politizerization. Attention must be paid to the possibility of a special lesion localized in the recessus hypo-tympanicus, as described by Kreshmann, of Magdeburg, which may be the cause of an obstinate otorrhœa resisting all treatment.

Dr. BORROZ (Barcelona). *Notes on a Case of Papilloma of the Right Nasal Fossa, with Histological Changes.*

Dr. VERDOZ (Barcelona). *Auditory Allochiria and Extra-Cranial Tinnitus.*

Cases of auditory allochiria are extremely rare, and I am only acquainted with that described by Gellé. Extra-cranial tinnitus, though a clinical curiosity, is not of such extreme rarity as the first-named phenomenon. The case which I now show is a very unusual example, exhibiting a combination of the two conditions. The patient, a neurasthenic woman of fifty-two, hears a noise which resembles the escape of steam, and localizes it at two or three mètres' distance from the ears. The auditory apparatus appears to be normal. The tuning-fork applied to the skull is heard, as it were, to emit a sound at two mètres' distance from the ear, and on the opposite side to that of the actual application of the instrument. The electric reaction of the auditory nerves is normal.

Every means of treatment employed has been unsuccessful.

In the present state of the question no explanation of the phenomenon is available.

Dr. VIOR (Rivadeo). *The Infections which follow the Piercing of the Lobules of the Ears.*

Dr. LLORENTE. *Intubation of the Larynx.*

In my seventy-two cases of intubation I have had eighty-two per cent. of cures. The best results are obtained when serum treatment is also employed, and these are superior to those of tracheotomy. Intubation is not indicated only in diphtheritic stenosis, but in all forms of stenosis, particularly those of syphilis. In the large majority of cases intubation should be employed, and tracheotomy only exceptionally. In cases of laryngeal croup, relatives will readily give their consent to the performance of intubation, when they would oppose a tracheotomy. Complications are more often met with in tracheotomy than in intubation.

Dr. BOTEY. *Treatment of Vertical Deviation of the Cartilaginous Septum, with Nasal Obstruction and Deflection of the Point of the Nose.*

The prominent portion of the septum should be anæsthetized with twenty per cent. cocaine. A vertical incision is then made of the same length as the eminence. This exposes to view the cartilage, which is then laid bare with an instrument which detaches the mucosa and perichondrium. Hæmorrhage is slight. The whole of the cartilage which projects between the lips of the incision is removed with scissors or knife. To facilitate proceedings the little finger should be introduced into the other nostril, and pressure exerted in order to reduce the deviated portion of the septum. To avoid the risk of perforation, I have had special instruments, which I now show, made for me in Barcelona. The after treatment is simple, and in seven or eight days the septum is firmly fixed in its new position. The detailed reports demonstrate the value of the proceeding.

*Ernest Waggett (Trans.).*

**AUSTRIAN OTOLOGICAL SOCIETY.**

*Meeting of November 24th, 1896.*

("Monatsschrift für Ohrenheilkunde," December, 1896.)

Translated and Abstracted by Dr. DUNDAS GRANT.

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*President*—Prof. POLITZER.

*Secretary*—Dr. POLLAK.

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Dr. MAX. *A Case of Exposure of the Promontory (?) ; Necrosis.*

The patient was a man aged twenty-nine, who in childhood had suffered from measles and later from scarlet fever. As the result of this latter he had suppuration of the right ear, which had persisted without intermission up to the present time. In the summer of 1895 he had severe vertigo for eight days, which subsided spontaneously under the influence of rest ; in the following May gastric spasms, which only yielded to a course of treatment at Carlsbad ; in the beginning of June, rapidly recurring attacks of sudden vertigo with loss of consciousness, so severe as to prevent him from walking home. On the 3rd October he came under observation, and the meatus of his right ear was found blocked up by a mass of polypi, bathed in a copious collection of foetid pus. The polypi were extracted, the operation giving rise to considerable hæmorrhage and transitory feeling of faintness. Subsequently chromic acid was applied to the stumps. Five days later the patient complained of attacks of indefinite vertigo, occurring frequently in the day. On the seventh day the probe struck upon a rough spot in the middle of the inner wall of the tympanum, and after chromic acid had been applied for several more days, so as to destroy all the surrounding granulations, the whole of this inner wall was exposed, and was seen to be of a yellowish-white colour, like macerated bone, while it felt rough to the probe, the tympanic membrane having almost entirely disappeared ; the promontory and the niche for the fenestra rotunda were as plain as in an anatomical preparation. The exposed bone was not mobile, and pressure on the stapes caused severe vertigo. Bone conduction was increased on the right side, air conduction entirely lost, both for the tuning-fork and for the watch. Speech was not heard on the right side so far as could be made out by the use of Dennert's experiment. The patient's own voice was heard in his right ear, like an echo. During this period the vertigo increased, and in a fortnight was so bad that the patient had to be confined to bed, although the secretion in the ear diminished very greatly, and ceased to be foetid. The vertigo gradually became less severe, the appetite improved, and the patient, after the two weeks, returned to his business, only suffering from occasional vertigo when he turned round suddenly. The facial nerve was at no time affected.

Dr. Max, on the strength of the above signs, made a diagnosis of necrosis of the labyrinth, or at least of necrosis of the inner wall of the tympanum, an opinion in which he was supported by Prof. Politzer. At the same time, the tuning-fork tests and the hearing of the patient's own voice did not seem to confirm this.

During the time that the patient was confined to bed, it seemed as if the sequestrum became smaller and got covered before and behind with mucous membrane. This epidermization extended continuously forwards, the niche for the round window disappeared, and the promontory showed only a very narrow strip on its most convex part, running from below upwards, this gradually becoming covered till at present only the uppermost portion of this strip can be made out, as a rough spot, about the size of a pin's head. The secretion has almost entirely disappeared. The tuning-fork tests are as before.

Dr. Max looked upon the morbid process which had taken place as a necrosis, brought about by the suppuration of the mucous membrane, which, in this part, takes the place of periosteum. He considered that if the condition had been allowed to continue longer, the necrotic process would have extended more deeply. He attributed the vertigo to congestion of the labyrinth, and he thought that the condition of the patient's health in other respects excluded the possibility of tuberculosis.

Prof. POLITZER thought that there was a simple exposure of the osseous promontory, from tearing-off of the mucous membrane during the extraction of the polypi. In such cases regeneration of the mucous membrane took place from the margins of the loss of substance, or from outgrowth of connective tissue from the vascular exposed osseous wall.

Prof. GRUBER was of the opinion that cases were not very rare in which spots on the promontory, where the mucous membrane was lost, felt perfectly rough without there existing any carious disease.

DR. FERDINAND ALT. *A Case of Nephritis; Hæmorrhage into the Labyrinth.*

The patient was a woman, aged twenty-four, affected with nephritis, producing an œdema of the face and upper and lower extremities. The urine was acid in reaction, with specific gravity 1013, a sediment containing vesical, pelvic, and renal epithelium, white blood corpuscles, hyaline casts with a covering of white blood corpuscles, epithelial casts, and two per cent. of albumen. The blood showed 2,680,000 red and 5581 white corpuscles in each cubic millimètre, the proportion of hæmoglobin being twenty per cent. On the 7th and 8th of November the patient complained of headache, vertigo, and epistaxis. Up till that time she had heard perfectly well.

During the night of the 9th she was wakened out of her sleep with noises in her ear, and with such violent giddiness that when she tried to sit up in bed she fell back. From that moment she was unable to hear with the left ear. On examination the membranes were found normal on both sides. On the right side the hearing for speech and the watch was normal. On the left side for the watch, and for the whisper, hearing was absolutely lost, and loud speech was only heard in the immediate proximity, as probably conducted to the right side. Weber was negative, Rinné on the right side positive. On the left side the C<sub>2</sub> tuning-fork in front of the ear was heard for a very much shortened period, and on the mastoid process was conducted to the right ear. There was no difference for high and deep tones. An ophthalmoscopic examination revealed in

the left eye fairly numerous small hæmorrhages, especially in the region of the vessels surrounding the macula ; small irregular spots on the macula with no marked abnormalities in the vessels ; while in the right fundus there was fairly marked cloudiness of the retina (below the papilla), very few hæmorrhages, and numerous foci of degeneration of a yellow colour arranged in stellate fashion. The history and the symptoms connected with the ear and eye justified the diagnosis of hæmorrhage in the left labyrinth.

Prof. JOSEPH GRUBER. *A Case of Chronic Suppurative Inflammation of the Middle Ear, with co-existing Rheumatic Paralysis of the Facial and Trigeminal Nerve.*

The patient was a youth aged twenty-two, who had suffered with suppurative inflammation of the left ear since the tenth year of his age, the condition sometimes subsiding and again rapidly waking up. The discharge increased very considerably after an attack of cold eight weeks previously. Three days before coming under observation he had taken a vapour bath, and on the following day became affected with violent headache, when he noticed that the corner of his mouth was drawn to one side. When examined he was found to be in strong condition, free from fever, or from affection of the internal organs, and quite normal as regarded his right ear. In the left ear the following conditions were found. In the neighbourhood of the tragus, and exactly under the anti-tragus, there was a white blister of herpetic character. The otorrhœa was profuse, and after syringing there was seen on the antero-inferior part of the meatal wall an ulcer of the size of a lentil, sharply defined, bathed with pus, tender on probing, but not reaching the bone. The tympanic membrane was red, swollen, and its features were unrecognizable. No perforation was visible, but on inflation one could be made out in the postero-inferior quadrant. The soft parts over the mastoid process were unchanged and free from tenderness. The watch was heard by the right ear at four mètres, and by the left at two centimètres. Weber was positive, Rinné positive on the right side, negative on the left. There was complete paralysis of the facial nerve and of the motor division of the left trigeminus. (The patient could not chew on the left side, nor move the lower jaw to the left, and during biting no contraction of the left masseter was manifest ; no changes in the mobility of the tympanic membrane could be decided on because of the existing inflammation.) No disturbance of sensation was present.

Otorrhœa subsided under treatment within eight days. The herpes and the ulcer in the meatus (resulting from herpetic vesicle) rapidly disappeared, as also did the paralysis of the trigeminal nerve. The facial paralysis disappeared in sixteen days on treatment in the hospital, with the exception of a very slight weakness of the branch going to the muscles of the mouth.

The exacerbation of an otorrhœa which had lasted for twelve years, the sudden occurrence of complete facial paralysis with severe headache, and the pronounced narrowing of the auditory meatus, might in such a case have been taken as indications for operative opening of the mastoid

process. On the other hand, the paralysis of the motor branca of the fifth nerve, the herpes in the meatus and on the auricle, as also the history of the occurrence of the paralysis immediately after a vapour bath, appeared to be indicative of a rheumatic origin, so that one was justified in abstaining from operative procedure.

Dr. VON FRANKL asked under what circumstances the aurist was called upon to operate in cases of total paralysis of the facial nerve.

Prof. URBANTSCHITSCH replied that facial paralysis was only an indication for mastoid operation when along with it there was evidence of disease of the mastoid process.

Dr. KAUFMANN. *A Case of Simultaneous Acute Affection of the Acoustic, Facial, and Trigeminal Nerves.*

A man, aged thirty-four, who was healthy in every other respect, became affected on the 20th of July with general disturbance of health, lassitude, loss of appetite, headache, and elevation of temperature to 38·4, without any known cause. On the 25th there came on a feeling of painful tightness in the left half of the face, with redness of the skin of the cheek, on which there were small vesicles. The case was diagnosed by Prof. Drasche as one of herpes zoster. In the afternoon of the same day the headache became intense, and was accompanied by severe vertigo and repeated vomiting. These symptoms persisted for several days. On the 29th of the same month there was sudden, complete paralysis of the facial nerve, with loss of taste and deafness. The internal organs were perfectly normal; no obvious affection of the brain or nervous system (the fundus oculi being normal). On the 10th of August the ears were examined, and the tympanic membranes, nasal passages, Eustachian tubes, and mastoid processes appeared normal on both sides. Hearing power on the right side was good, and on the left side a whisper was heard only close to the concha, loud speech scarcely half a metre distant, and it was found to make no difference whether the left meatus was closed or open. (Weber was negative, and neither high nor deep toned tuning-forks were heard by air conduction on the left side). There was severe vertigo, especially when the eyes were closed, and there was inability to walk in a straight line, or to stand upon one leg. Treatment consisted in the internal administration of iodide of soda, one gramme daily, subcutaneous injections of chloride of pilocarpin, and acoustic exercises. On the 27th of August the paralysis of the facial nerve had completely disappeared. The hearing power improved within the first few days up to about two mètres for loud speech, at which stage it remained stationary. The noises in the ear persisted, but the vertigo and general disturbances quite disappeared.

As regards the diagnosis, Dr. Kaufmann considered that in view of the simultaneous affection of the two branches of the trigeminal nerve and the facial above the origin of the chorda tympani, and the deafness accompanied by Ménière's symptoms, that the disease in all probability must be in the nerve trunks in the left half of the base of the brain. New growths (from the bone, from the meninges, or from the brain substance), aneurism, hæmorrhage, syphilis, hysteria, and meningitis seemed

to be absolutely excluded; one might think, however, of a rheumatic affection (Bing, Fränkl-Hochwart). Dr. Lorenz diagnosed neuritis, and the writer was in favour of this opinion. The neuritis seldom affected the nerves of sense (Bernhardt, Remak); the symptoms which supported the diagnosis of neuritis were the feverish onset, the occurrence of the herpes, the rapid course and the subsidence of most of the symptoms. The fact that the functions of the ear have not been completely re-established is in agreement with the statement put forward by Prof. Politzer, that in affections of the auditory nerve return to the normal condition is a very rare occurrence.

Dr. Kaufmann referred to the analogous cases described by Hofmann ("On the Study of Peripheral Paralysis of the Facial Nerve," *Zeitschrift für Nervenheilkunde*, 1894), and the case of Toby Cohn, recently published by Frankl-Hochwart in his monograph: "*Ménière's Complex of Symptoms*."

Prof. URBANTSCHITSCH had observed a similar case fifteen years previously, in which the condition remained up till the time of death.

Prof. POLITZER had in several cases observed a peculiar form of facial paralysis with dulness of hearing power. The palsy came on with severe pains in the deeper parts of the ear, lasting for several days. Simultaneously there came on, with or without subjective noises, a dulness of hearing of varying degree. The affection, which subsided spontaneously, or under the action of iodine internally and electricity locally, ran through its course to recovery in from eight to fourteen days.

Prof. Politzer thought that in such cases there was a rheumatic inflammation in the part of the facial canal, lying in the petrous portion of the temporal bone, in which the hyperæmia extended to the neighbouring labyrinth, whereby the transitory disturbance of hearing was brought about.

Dr. D. KAUFMANN. *Otalgia during Influenza.*

Within the last few weeks there came to Prof. Politzer's out-patient department seven patients who complained of severe pains in the ear, which had come on with considerable feverish disturbances, remained intense for from three to eight days, and then slowly subsided. The objective appearances (meatus, membrane, middle ear, mastoid) were absolutely negative (in one case only there was retraction of the membrane with calcareous deposit, but good hearing power); no cause for otalgia was to be made out (carious teeth, disease of the nose, pharynx, or larynx). In a few patients there was a slight degree of swelling in the naso-pharynx, which lasted a few days, after which the pain subsided. In this case Dr. Kaufmann was led to the conclusion that there was some connection between otalgia and influenza, on account of the simultaneous occurrence of so many cases, the high degree of pain, the negative objective conditions, the slight effect of the remedies usually employed for otalgia, and the fact that at the same time there had come under observation a series of cases of acute otitis, which presented the signs characteristic of the influenzal form: hæmorrhagic vesicles in the meatus, bulbous myringitis, irregular course of the inflammation, early extension to the mastoid process, with severe general disturbance, and so forth.

He had had the opportunity of examining, in Neusser's clinic, a female patient who, towards the end of October, was suddenly attacked with headache, loss of appetite, pains in the limbs, and chilliness followed by rigor, and four days later attacks of cough. On the 9th of November there came on severe pain, especially in the right ear. The aural appearances were perfectly normal, but there was slight tenderness on pressure at the exits of the second and third divisions of the right trigeminal nerve. On bacteriological examination of the sputum the bacilli of influenza were found, partly intra-cellular, partly extra-cellular, and their identity was confirmed by cultivation.

Dr. Kaufmann quoted from Dr. Hammerschlag's communications an instance in which a child in a family was affected with influenzal otitis, and at the same time the servant maid suffered from severe otalgia, with constitutional disturbances, which lasted for eight days, in spite of the extraction of two teeth. Similar cases have occurred in the experiences of other observers.

The writer felt justified in forming the opinion that in these cases we had to deal with an influenzal affection, taking the form of otalgia, which came on alone or along with the other symptoms of influenza, which began with fever and slight disturbance of the general health, lasted from three to eight days, subsided slowly, and sometimes left behind it for several days a disturbance of the general constitution.

In support of this he reminded his hearers of the fact that influenza very frequently gave rise to neuralgia, especially in the trigeminal nerve. He quoted an interesting case published by Voges ("Berlin Klin. Woch.," 1894). The patient had suffered for fourteen days with intense headache and fever, accompanied by spasmodic pain in the neighbourhood of the right maxillary antrum and right ear. There gradually extended very marked hyperæsthesia over the whole body, so that the slightest disturbance called forth a painful shrinking of all the muscles. After the illness had lasted about twelve days, there occurred the expectoration of a few greenish yellow masses of sputum, and in this was found an almost pure culture of the bacillus of influenza. Dr. Kaufmann further referred to the investigations of Cantani, Jun., carried out in the Institute for Infectious Diseases in Berlin, with regard to the action of influenzal bacteria upon the nervous system. From these it appeared that the influenzal bacteria generated an inter-cellular poison which acted injuriously, in the first instance, on the central nervous system. In the literature of the diseases of the ear arising from influenza, the intense painfulness of the inflammation is signalized. Prof. Politzer has stated, "There occur cases in which, after the subsidence of the suppuration, "neuralgic pains remain behind, having the character of otalgia." At the same time the fact that otalgia, without inflammatory processes in the ear, might occur epidemically as an abortive form of influenza, has not to the best of Kaufmann's belief been mentioned.

Prof. URBANTSCHITSCH had seen cases of pains in the ear which disappeared after the removal of the inferior turbinated body.

Dr. VON FRANKL observed three years previously a similar case, which he thought was now explained.

Dr. G. BRUHL. *Experiments with English Thyroid Tabloids on Twenty-one Patients in Prof. Politzer's Clinic.*

Fourteen of these patients remained under observation and continuous treatment. Out of these, eight obtained no benefit, either subjective or objective; slight fluctuations of hearing power were not attributed to them. Of the remaining six, four improved considerably, and two very much indeed; in the best case, which was characterized by a pronounced hyperæmia of the wall of the promontory, the hearing power rose from  $\frac{1}{2}$  to 7 mètres for loud speech, and from 10 to 100 centimètres for the acoumeter; considerable alleviation of the subjective disturbances being also obtained. At the commencement the dose was one tabloid, increased to three; and after four weeks there was an interval of one week, when the treatment was again started; during the whole time no other treatment was carried out. The speaker sought for the explanation of the good effect of the thyroid treatment in adhesive processes in the middle ear, either in the iodine element in the preparation or in some functional association between the thyroid gland and the organs of hearing. There is evidence of such association in the facts observed in myxœdema and bronchocele. It remains to be seen whether this supposed interdependence of the two organs is in any way a cause of diseases of the middle ear. Dr. Brühl thought that tentative use of the thyroid method of treatment was indicated by those processes in the middle ear where retrogressive changes were possible. He had found no injurious effects even after as many as two thousand of the tabloids had been taken, but heart disease was a contra-indication.

Dr. F. ALT had carried on similar investigations with thyroidin tabloids in cases of disease of the middle ear under Prof. Gruber's observation, and had found very satisfactory results in some cases in which previously the most various forms of treatment had been carried out for a considerable time without any noteworthy result. He agreed with the previous speaker, and he recommended the tentative employment of thyroid tabloids in the residua of suppurative affections of the middle ear, in which the mucous membrane of the tympanum finally underwent cicatricial changes which led to rigidity of the chain of ossicles, fixity of the stapes, and obliteration of the round window—changes very analogous to those taking place in severe catarrhal processes.

Prof. POLITZER was of the opinion that the results obtained were sufficiently encouraging to warrant further experiments, but he warned his hearers against too sanguine expectations, and recommended that conclusions should not be arrived at until it had been found by prolonged observation that the improvement was permanent and not transitory.

Prof. A. POLITZER. *Severe Suppuration of the Middle Ear after Influenza, following a Symptomless Course. Recovery after Opening the Mastoid Process.*

The patient was a woman, aged thirty-two, who in February of this year became affected with suppurative inflammation of the right ear during an attack of influenza. The profuse suppurative discharge refused to yield to antiseptic treatment carried out for several months. On

inspection there was found a small perforation in the inferior half of the membrane, perfect patency of the Eustachian tube, and complete absence of any sign of caries or granulation formation in the tympanic cavity or membrane. The mastoid process was free from pain and from tenderness on pressure; there were no subjective disturbances. Judging from the profuseness of the discharge, and its obstinacy under all treatment, Prof. Politzer decided that the intractable suppuration depended upon an abscess in the mastoid process, and that a chiselling operation was called for.

On the 14th of October the operation was carried out, and after a few strokes with the chisel a large cavity was found in the mastoid process, containing pus and granulation tissue. After the clearance of this by means of the sharp spoon, no communication could be made out between the cavity and the mastoid antrum. In view of Prof. Politzer's previous experience, that in such cases the suppuration in the tympanum ceased without the antrum being opened, no endeavour was made to effect an opening into the antrum, and the wound was plugged with iodoform gauze for five or six days. A few days after the operation the otorrhœa had markedly diminished, and after fourteen days every trace of suppuration had disappeared. There remained at the time of description only a small pin-hole perforation, which would probably soon close up. The wound over the mastoid process had nearly closed by granulation. The case was interesting inasmuch as, in spite of the fact that the disease had lasted for eight months, there were no objective or subjective evidences of an abscess in the mastoid process, and that the presence of such could only be inferred from the obstinacy of the otorrhœa.

The case showed the powerful influence of a shut-off mastoid abscess upon the duration of tympanic suppuration, which diminished so rapidly after the opening of the abscess, in spite of the fact that the antrum was not reached by the operation.

#### AMERICAN OTOLOGICAL SOCIETY.

(From Vol. VI., Part III., of "*Transactions.*") July 14th, 1896.

(Continued from page 92.)

Dr. ARTHUR MATHEWSON, *President.*

Dr. HERMAN KNAPP. *A Case of Purulent Otitis Media, in which marked Symptoms of Meningitis developed. The Opening of the Mastoid and Cranial Cavities was followed by prompt Improvement and subsequent Recovery.*

The cure of purulent otitic meningitis may be considered the last and greatest triumph of modern surgery. The only undoubted cases are those of Macewan, published in 1893. The case reported was first seen by Dr. Knapp in consultation with Dr. J. A. Wells, of Englewood. The illness began on May 4th, 1896, with a tonsillitis, which subsided, only to

be followed, on the 13th, by a second rigor, high temperature, and involvement of the left ear, with discharge a few hours later. The temperature remained high, together with pain and dizziness; vomiting of a projectile character set in on the 17th; a temporary improvement set in the next day, lasting till the 26th, when nausea, vomiting (slight), and delirium (slight) appeared, with cessation of discharge. Up to this time the pulse had been disproportionately slow.

On May 27th Dr. Knapp saw the case for the first time; the temperature was 103, and pulse 120 to 140, weak and irregular. Delirium, great pain, and also tenderness on deep pressure. The mastoid was swollen. The diagnosis lay between mastoiditis (carious osteitis) and phlebitis, or beginning purulent mastoiditis.

Operation was decided on and proceeded with forthwith. The mastoid cells were lined with a thickened and vascular mucosa; the sinus pulsated well, but on exposing the dura to an extent of two centimètres above and in front of the sinus it was reddish. The bone was then removed further in the same direction, but no pus was found—only the dura discoloured, which was of a reddish-ivory tint. Twenty-four hours after the operation abundant foul, purulent secretion was found, but this was the one and only discharge of any kind, and by July 6th the health was completely restored and the wound almost closed.

Dr. GORAM BACON. *A Case of Brain Abscess, secondary to Chronic Suppurative Otitis Media, and presenting Unusual Symptoms. Operation. Recovery.*

The patient, a man of thirty-two, had suffered with chronic suppurative otitis media for fifteen years, and for some time past his friends had noticed him to act strangely at times, and he had complained of pains in his head. On December 5th he was seen by Dr. Bartlett, who found him with a temperature of 104°, intense headache and pain; in the afternoon of the same day he had a general convulsion, with muscular twitchings and frothing at the mouth, with unconsciousness lasting fifty minutes.

He was removed to the New York Eye and Ear Hospital, and Dr. Bacon opened the antrum; the sinus lay far out of the usual position and was wounded, blood flowing freely. For two days the patient did well, but on December 8th the temperature ran up to 102°·3° and he became aphasic; on December 9th he had a rigor, had headache, and aphasia was more marked; the urine contained both albumen and sugar.

On December 10th the lateral sinus was explored and found healthy; a button of bone was removed 2 inches above the external meatus; the dura bulged slightly and pulsated. The opening in the skull was prolonged down and backwards, and on separating the thickened dura from the tympanic roof pus was found; an opening through the dura was found, and half an ounce of pus escaped. After Y-shaped incision of the dura, the little finger was introduced in, up, and backwards; another ounce and a half of foetid pus and brain tissue escaped. Iodoform gauze was inserted into the abscess cavity and the wound dressed.

By January 29th the aphasia had disappeared, and a facial palsy

which appeared after the first operation was almost gone. There were convulsions at times during the healing, which were caused by retention of thin pus.

In conclusion, the reporter, after giving his experience of brain abscess, noted the value of aphasia as a symptom in left-sided disease in right-handed people.

Dr. ROBERT C. MYLES. *A Case of Otitic Brain Abscess in a Child Seven Years Old. Operation. Cure.*

The patient was seen by Dr. Myles in consultation with Dr. G. B. Teames, and the history of the case was that she had had discharge from the right ear for three years. When seen she was unconscious, and there was a swelling over the mastoid. The swelling was incised and the bone found carious and necrotic; nearly all the mastoid process was removed, including the outer wall of the antrum and roof of the digastric fossa; when curetting the tegmen the instrument passed easily into the cranial cavity, and part of the attic roof was pulled away; a gush of pus, fully a wineglassful, followed; a probe passed an inch and a-half into the cavity. Rapid recovery ensued, only retarded slightly by a burrowing abscess under the mastoid process and occipital bone. A year after the operation she commenced to regain mental vigour, and now, about twenty months after, she has no mental weakness. The drum and ossicles are visible, and there was discharge when irrigation was neglected some time previously.

Dr. KIPP fifteen years ago reported two cases of acute otitis media with optic neuritis and recovery, and had since seen recoveries in other cases where operation had been refused. Operation on the mastoid was not always necessary.

Dr. BACON: If when mastoid symptoms are present, and cerebral also, then, should the mastoid be sclerosed, this demands investigation of the cranial cavity.

Dr. MYLES: If the bone is carious and not necrotic, it will frequently return to a healthy state, and so should not be too freely removed.

Dr. GRUENING: Does Dr. Myles mean that diseased bone should be left?

Dr. MYLES: Carious bone may become healthy again, and in draining a cerebral abscess through a large opening these may become infected and meningitis set in.

Dr. GRUENING and Dr. DENCH considered it of importance surgically to remove all diseased tissue in these cases.

Dr. ROBERT T. POOLEY. *A Case of Otitis Media Purulenta Chronica, Mastoid Periostitis, Mastoiditis Interna, Abscess of Cerebrum, Thrombosis of Lateral Sinus, Meningitis, Optic Neuritis. Death.*

The patient, a lad of twelve, had suffered for several years with left chronic otitis media purulenta, and when seen on July 20th, 1892, there was swelling over left mastoid, with pus exuding from the meatus and bulging of the posterior wall. Temperature 102.5, pulse 128. There was a history of pain in the head and ear for some days previously. Wilde's

incision was made by the house surgeon on his admission to the New Amsterdam Eye and Ear Hospital that day.

The temperature remaining high, Schwartze's operation on the mastoid was undertaken on the 26th, and a drachm of *débris* removed from the antrum, and much pus. The lateral sinus was exposed during the operation.

A rigor occurred on the 27th, with a temperature of 104.5; this was brought down by means of ice to head and abdomen, and a fairly free use of phenacetin. On the 29th choked disc was found on the left side. On the 31st there was a rigor, and he became blind in the right eye on August 20th. Right motor paralysis was noticed on the 23rd, and he died on September 3rd.

At the *post-mortem*.—The vessels of the dura engorged and lifted up by purulent collection. The left hemisphere was bathed in pus, also the bases of the frontal lobes. There was an encapsulated abscess in the anterior border of the occipital lobe on the left side, and acute softening around it; also thrombosis of lateral sinus to the torcular, and an opening through the temporal bone along the lateral sinus was found.

Dr. Pooley reviewed the case at length, and pointed out that even had they succeeded in evacuating the abscess, which could not be localized, they would still have had the meningitis and thrombosis to deal with. And he also referred to his views on the value of optic neuritis as enunciated by him at the American Laryngological, Rhinological, and Otological Society. (JOURN. OF LARYNG., p. 13, Vol. XI.)

Dr. EDWARD B. DENCH. *Otitic Meningitis; Operation; Cure.*

The following case seems to demonstrate, even more clearly than that reported earlier in the meeting, the advisability of exploration in cases of doubtful intracranial involvement due to ear disease. In order to minimize the shock attendant upon prolonged operative procedures on the exposed contents of the skull, the primary incision should be one which will allow of exploration of ear, sinus, and cerebrum, and posterior fossa. This saves the delay of prolonging incisions. The incision advised starts just below the tip of the mastoid, is carried half to three-quarters of an inch posterior and parallel to the auricular attachment, and then forward to half an inch posterior to the external angular process of the frontal bone.

The patient was a man of about sixty years, who twenty years ago had suffered with double otitis suppurativa after enteric fever. He had, however, no trouble until five weeks before he was seen by Dr. Dench. At this time he was seized with vertigo and giddiness, so much so that he had to retire to bed. The vertigo receded, but pain appeared in the left side, most marked in the temporal region. After two or three weeks the temperature, previously normal, ran up to 102° to 104°. The cranial cavity was opened as described before; the meninges were congested, and as the bone was removed towards the meninges the congestion became more intense, and there was free discharge of bloody serum. A probe passed along the tympanic roof discovered rough bone, and enabled a still larger quantity of serous fluid to escape. The surrounding brain

was carefully explored, as was also the sinus, with negative results. An iodoform gauze drain was inserted along the course taken by the serum, and antiseptic dressings applied. He rallied quickly from the operation, and left the hospital in four weeks. In this case there had been no effort at a cure by nature by shutting off the infected area, and but for the operation rapid extension would have taken place.

Dr. GORAM BACON. *A Case of Acute Otitis Media followed by an Abscess in the Temporo-Sphenoidal Lobe. Operation. Death from Shock. Autopsy.*

The patient, a young man of twenty-five years of age, came to Dr. Whiting, giving a history of a discharge from the left ear four weeks before. The attic was found to be the seat of trouble, and a few drops of pus were evacuated. This was several times repeated, giving relief from severe headache. He at times had mastoid tenderness and loss of memory for objects and names, also fits of acting and talking strangely. He now came into hospital, eight weeks after the initial attack, having refused to come in before. His temperature was 98°8', pulse 56, respirations 16. Abscess of temporo-sphenoidal lobe was diagnosed, but operation was deferred by the advice of Dr. M. A. Starr. But the antrum was opened and cleansed. The bone was much sclerosed. For six days there was great improvement; less headache and memory of objects perfect, but still difficulty with proper names. But on this day he became childish in demeanour. Four days later, April 5th, 1896, he vomited twice, and he had vomited once on the 4th, and by 10 a.m. he was delirious. Operation was decided on, and a button of bone 2·5 centimètres above the external meatus was removed. The opening was enlarged with rongeur forceps, and half an ounce of pus evacuated from a depth of three centimètres in a direction backwards, inwards, and upwards. He became much collapsed during the operation, but was rallied by hypodermics of strychnine, nitro-glycerine, and ammonia. He, however, sank from shock two hours after the operation. During his stay in hospital the temperature never rose above 100°6, and was generally between 97°8 and 99°6; respiration varied from fourteen to twenty, and pulse from fifty-four to ninety-nine.

*Autopsy.*—There were two abscess cavities found, both in the temporo-sphenoidal lobe; the second was lying in the middle of an area of softened tissue, presumably caused by escape of the abscess contents into the brain tissue.

Dr. FRYER considered that frequently brain abscesses were due to transmission through the carotid artery.

Dr. REEVE: Did Dr. Dench say, "If there is drainage of the antrum through the tympanic cavity, it seems unnecessary to open the mastoid cells"?

Dr. DENCH replied in the affirmative.

Dr. REEVE had operated within the last three weeks on such a case, and had found a large quantity of fœtid pus in the antrum.

Dr. GRUENING made remarks of similar import.

Dr. RANDALL did not agree that an extra-dural abscess was a conser-

vative process, as he had not infrequently noticed cases of brain abscess accompanied by extra-dural abscess with intact meninges, or of extra-dural abscess with the brain already infected.

Dr. DENCH, when saying extra-dural abscess was a conservative process, meant it shut off the remaining meningeal cavity from infection. And in his case, as he could pass a probe into the antrum, he concluded there was free drainage.

Dr. BACON : These brain operations should not be of any unnecessarily long duration. To drain the antrum thoroughly, he considered external opening advisable.

Dr. J. E. SHEPPARD. *An Analysis of One Hundred and Fourteen Cases of Mastoid Involvement complicating Acute Middle Ear Suppuration.*

Brief notes are given in each case, and the whole are analyzed and discussed.

These cases were all of less than six weeks' duration, and all were complicated with otic discharge, and in each one the mastoid was distinctly involved. Fifty-one were operated on by Dr. Sheppard, 3 by others ; 1 died without operation, 34 recovered, and 25 were lost sight of. As symptoms there are : discharge, 114 ; pain, 102 ; mastoid tenderness, most frequently apex, 101 ; postero-superior perforation of membrane, 52 ; trunk, 56 ; bulging of postero-superior canal wall, 36 ; and swelling over mastoid, 22. There were 65 males and 49 females. The etiology is given, but presents no feature of special interest. The various complications were as follows : mastoiditis, 77 ; Bezold's form, 3 ; mastoiditis and periostitis, 19 ; ditto and suboccipital abscess, 1 ; mastoiditis in old cases of middle and internal ear disease, 2 ; ditto with otitis externa circumscripta, 1 ; ditto with erysipelas, 3 ; ditto with diabetes, 2 ; ditto with diabetes, erysipelas, and meningitis, 1 ; ditto with meningitis, 2 ; ditto with meningitis and cerebral abscess, 1 ; ditto with tender glands under apex, 2. Of 83 cases which were really under Dr. Sheppard, 5 died—1 within 3 hours of being seen, from meningitis, from a ruptured cerebral abscess, and without operation ; 2 from meningitis ; 1 diabetic from erysipelas and meningitis ; and the fifth from erysipelas.

In the concluding remarks it is pointed out that 21 out of the 65 cases with known cause were subsequent to *la grippe*. Abortive treatment should usually be employed for about five days. It is not necessary to have external symptoms before operating, as the operation itself is free from danger. Finally, a generally safe rule is, when in doubt, operate.

Dr. MYLES : What proportion of cases which refused operation died ?

Dr. RANDALL could give still better figures from his treatment, which had been more expectant. His 120 operations represent quite 500 in whom mastoid involvement seemed imminent. As to Bezold's form, he had had 12 in his own practice, and one of his assistants had had quite a number ; and Orne Green reported 13 amongst 80.

Dr. KNAPP advised operation without delay in cases of mastoid involvement somewhat removed from the ear. He did not know there was no communication between the antrum and mastoid cells, as stated by Dr. Gruening.

Dr. GRUENING : The communication is usually only present in children.

Dr. JOHNSON agreed with Dr. Randall's views.

Dr. BACON : Influenza cases require operation more often than others.

Dr. THEOBALD pointed out the difficulty often found in distinguishing between deep and superficial mastoiditis.

Dr. SHEPPARD : The finding of unhealthy granulation tissue justifies operation.

Dr. KNAPP advocated immediate microscopic examination of tissue removed.

Dr. SHEPPARD usually used antiphlogistic measures for from two to five days, and believed by acting as he did regarding operative treatment he saved the patient from both risk and pain.

Dr. CHARLES J. KIPP. *A Case of Purulent Inflammation of the Middle Ear, with Perforation of Mastoid Cells. Followed by Erysipelas.*

The patient was under treatment for about three months with double chronic suppurative otitis, but was unable to attend to herself well, and on March 22nd she presented herself at the New York Eye and Ear Infirmary and was admitted into the German Hospital. She had a large swelling below the right mastoid ; the skin was neither hot nor red, and fluctuation was indistinct. The swelling was incised and the mastoid found perforated on the mesial side of the digastric fossa, and the pus had burrowed far down the neck under the cervical fascia ; pus and granulation tissue were removed from the antrum, and in the mastoid two large pus-filled cavities were found. The day following the operation erysipelas set in, with a temperature of 104·8° Fahr. ; this gradually receded under treatment, and the wound healed, but at the time of discharge from the hospital there was still slight otorrhœa.

Dr. CLARENCE J. BLAKE. *The Use of Drills in Mastoid Operations.*

The possibility of estimating roughly the amount of available operative space in any mastoid was pointed out. For instance, in a large rounded mastoid with a shallow digastric groove there was usually ample room ; whilst, on the other hand, a narrow mastoid running into a point, with a deep digastric groove, usually gave but little room. And as an examination of over three hundred crania showed there was a fair amount of symmetry on the two sides, so if the outline on the side to be operated on was masked by swelling, the opposite one might act as a guide. He next proceeded to advocate the use of his hand-drill, which had a broad cutting edge, and was made to cut at an obtuse angle and was used to prepare the way for the chisel.

Dr. RANDALL agreed with Dr. Blake's anatomical statements, but should hardly like to place the drill in the hands of the ordinary post-graduate student.

Dr. SEELY : From how many cases did Dr. Blake draw his twenty-eight operations?

Dr. JACK : About fourteen hundred were registered that quarter.

Dr. MYLES never used the drill.

Dr. GRUENING had often felt the need for an instrument to replace the chisel, especially in sclerosed mastoids. He pointed out the danger of rupturing a thin-walled cerebral abscess, and referred to a new bur which ceased rotating when it entered a cavity.

Drs. BLAKE and SPRAGUE considered Dr. Blake's instrument very valuable.

Dr. THEOBALD : Were the bones passed round extreme cases?

Dr. BLAKE : Yes.

Drs. MATHEWSON and RANDALL had each similar specimens.

Dr. ST. JOHN reduced the concussion by a rubber cap on the chisel.

Dr. BLAKE agreed with Dr. Randall as to teaching students.

Dr. B. A. RANDALL. *Some Observations on Objective and Subjective Tinnitus, Aneurismal, Anæmic, and Muscular.*

Dr. Randall stated that for years he had himself suffered from tinnitus, and had no diminution in hearing acuity. He considered anæmia was not sufficiently recognized as a cause, and that the deleterious effect of drugs like quinia was overrated, and also that an anæmic bruit might be conducted up *viâ* the jugular. He reported a case of objective tinnitus checked by pressure by the catheter and on the carotid. In this case aneurism was diagnosed, and ligation of the common carotid proposed but not agreed to by the patient. He had frequently observed the muscular form of objective tinnitus.

Dr. BLAKE also suffered from tinnitus, which was temporarily relieved by quinine in small and frequent doses.

Dr. RICHEY referred to Politzer's observations on hyperostosis around the footplate of the stapes.

Dr. THEOBALD had suffered from tinnitus which was due to eye strain from myopia.

Dr. KIPP had reported a case of aneurismal tinnitus fifteen years ago.

Dr. MULLER had also suffered ; his was tubal in origin, and had yielded to treatment.

Dr. GORAM BACON exhibited a *New Rongeur Forceps* for enlarging openings made by trephines, or the rapid cutting away of considerable portions of bone.

R. Lake (Abs.).

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## ABSTRACTS.

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### DIPHTHERIA, &C.

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Goodall, E. W.—*Three Cases of Diphtheria, occurring in Patients the Subjects of Nephritis, treated with Antitoxin.* "Lancet," Nov. 21, 1896.

THESE three cases are interesting when considered in relation to any supposed effect of antitoxin on the kidneys. In Cases 1 and 2 the patients were actually suffering from nephritis when the serum was injected, and the renal inflammation was in no way aggravated—quite the contrary, in fact, in Case 2. In Case 3, the

patient had apparently recovered from the nephritis; but there was a recurrence of the latter four days after the antitoxin rash had appeared and while it was still present. It is possible that in this case the serum caused a fresh lesion in organs just recovering from an acute inflammation. This is the only case in which the author has seen nephritis follow an injection of serum (though in one case of hæmorrhagic diphtheria he has observed hæmaturia), and the symptoms lasted only for five days. But diphtheria occurring during the third or fourth week after an attack of scarlet fever is occasionally coincident with the onset of nephritis; and it is to be noted in Case I that a relapse of nephritis accompanied the secondary diphtheria, the symptoms being observed before the administration of antitoxin. Indeed, now and then a case of scarlatinal nephritis relapses from no apparent cause.

*St Clair Thomson.*

**Thomas, A. M.**—*Orotherapy at Nursery and Child's Hospital, 1895-96.*  
 "Med. Record," Dec. 5th, 1896.

THIS is a concise report on the value of antitoxin as a prophylactic in diphtheria. An epidemic of diphtheria in the hospital was controlled by immunizing "the whole hospital" in April, 1896. From April no case occurred till October 26th. This was a case of true diphtheria with Klebs-Loeffler bacillus. The child was promptly isolated, and all the rest in the ward (23) were injected with from 50 to 200 units of serum. No one developed diphtheria. Some, however, had nasal discharge (independent of the case of diphtheria), in which Loeffler's bacillus was found. This had been observed not infrequently, and in certain instances these cases seemed to be the cause of outbreaks of definite diphtheria in the same ward. In all, there were 80 cases with nasal discharge, in which the bacillus was repeatedly to be found, but presenting no symptoms of diphtheria.

Dr. Park investigated four of these cases, in which the bacilli were present two months after immunizing and local treatment. He found the bacilli not virulent when injected into guinea-pigs.

Three hundred and twenty-six children have received immunizing doses of antitoxin, and no serious accident has to be recorded. Urticaria, œdema (in one case extending from hip to toes), elevation of temperature, and slight diarrhœa, are the most serious complications. That it is an effective prophylactic is shown by the facts: (1) that last year the epidemic ceased when the whole hospital was immunized; and (2) that it has not recurred, whereas an epidemic outbreak of diphtheria has been for many years an annual occurrence. Only four, out of 326 children immunized, subsequently developed diphtheria, and in two of these the condition previous to the immunizing was not known.

*A. J. Hutchison.*

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## MOUTH, &c.

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**Burton-Fanning, F. W.**—*Sewer-Air Poisoning.* "The Lancet," Oct. 24, 1896.

A RECORD of eleven cases in which the symptoms were attributed to the effects of sewer air. This opinion is based on the following facts: They did not conform to any described disease; they presented many features in common amongst themselves; in the surroundings of all the cases some grave sanitary defect existed, and the removal of this was followed, in most of the cases, by recovery. Amongst the chief symptoms were: fever; rigors; headache; pains in the limbs and elsewhere; petechiæ on the lower extremities, or erythema annulare; lymphangitis on the

legs or arms; suspicion of peri- or endo-carditis; and albuminuria. This latter was, in fact, the most constant symptom, for out of ten cases only one presented no evidence of renal affection. Amongst other symptoms were severe epigastric pain, phlebitis, cardiac asthenia, pleurisy, bronchitis, vomiting, diarrhoea. To laryngologists these cases are interesting, from the fact that several of them presented evidence of tonsillitis.

StClair Thomson.

**Dubois, A.**—*Scarlatinous Angina and Treatment by Marmorek's Serum.*  
"Thèse de Lille," 1896.

THE scarlatinous anginas are of different varieties: in the beginning, erythematous angina, sometimes pseudo-membranous; on the contrary, in the stage of convalescence, the angina is frequently true diphtheria. The bacteriological examinations show that these non-diphtheritic anginas are of streptococcic origin. For preventing complications, Dubois recommends the employment of Marmorek's serum, with careful aseptic precautions, for sepsis is caused by want of them, and wrongfully attributed to the serum. As auxiliary treatment, Dubois advises the carbolic lavage, painting with steresol, and gargling with Labarraque's liquor, 50 per cent.

A. Cartaz.

**Gould, Pearce.**—*A Case of Tumour of the Pharynx; Removal after Laryngotomy; Recovery.* "The Lancet," Oct. 24, 1896.

LARGE tumours of a simple nature do not often require removal from the base of the skull at the age of this patient (twenty-nine), naso-pharyngeal fibromata, which are the most common form requiring extensive operation, being met with from ten to twenty years of age. The method employed in this case—removal after splitting the soft palate—was apparently first employed by Manne, of Avignon, in 1711, the preliminary laryngotomy, with plugging of the pharynx by a sponge, being an important addition of more modern character. The tumour was the size of a large Tangerine orange, growing from the base of the skull into the naso-pharynx. It was smooth and globular; there was no bony deformity. Chloroform having been given, laryngotomy was first performed, and a sponge placed in the pharynx. The soft palate was then divided in the middle line. The tumour was removed with the knife and raspatory, the hæmorrhage being slight. The soft palate was at once united by silkworm gut sutures. The patient made a good recovery, and when he left the hospital at the end of seventeen days the soft palate had united, and nothing was to be felt in the naso-pharynx.

StClair Thomson.

**Hamilton, H. D.**—*Non-Malignant Tumours of the Tonsil, with Report of a Case.* "Montreal Med. Journ.," Sept., 1896.

A DESCRIPTION and a good photographic representation of a large semi-pedunculated lymphangioma, springing from the upper part of the right tonsil. The patient was a man of twenty-two, recently married; and it appears that rapid increase in size occurred, causing dyspnoea, possibly connected with sexual activity. The growth was pear-shaped, measuring three inches by three-quarters of an inch by half an inch. The surface was pink in colour and perfectly smooth. It was soft and doughy in consistence; and microscopic examination revealed a large quantity of fat, together with lymphangiomatous tissue. No general glandular or tonsillar disease was present in the patient.

Ernest Waggett.

**Jackson, Henry.**—*The Treatment of the Throat, Nose, and Ear in Scarlet Fever.* "Arch. Ped.," XIII., 821.

THE initial sore throat—characterized by bright scarlet macular eruption—though sometimes leading to troublesome swelling, is, as a rule, relieved by sucking of

ice or a warm saline solution. Chlorate of potash should be avoided as possibly irritating to the kidneys. The pseudo-membranous lesions which develop about the fourth day require careful attention as the possible source of septicæmia, otitis media, and suppuration of cervical glands. Though extension to the larynx is not to be apprehended, extension upwards to the nose is to be feared as a serious complication, and the routine use of antiseptic sprays is, therefore, indicated. Experience shows that ear disease is more frequent where the douche is used instead of the spray. A 25-volume solution of peroxide of hydrogen, used in a glass spray-producer, will be found advantageous. Bacteriological examination of the false membrane reveals streptococci in abundance, and Marmorek speaks with enthusiasm of the results obtained in serious scarlatinal throats and cervical abscess when the antistreptococcus serum treatment is adopted. *Ernest Waggett.*

**Koplik.**—*Diagnosis of Measles from Study of the Exanthema as it appears on the Buccal Mucous Membrane.* "Arch. Ped.," XIII., 918.

ON careful examination of the inside of the cheeks at the onset of an attack of measles, and before the appearance of skin eruption, a peculiar and pathognomonic condition is detected. This consists of a distinct eruption, composed of small irregular spots of a bright red colour. In the centre of each spot is a minute bluish-white speck. It is to be seen on the inside of the lips and cheeks, but not on the hard or soft palate. There may be half a dozen spots, or they may cover the mucous membrane. The bluish-white spots never become opaque white, nor do they coalesce to form plaques. As the skin eruption comes out the discrete character of the buccal eruption is lost, and appears as a diffuse red background, with innumerable bluish-white specks scattered over it. The eruption has faded by the time the skin exanthem is at its height. This condition is invariably present in measles, and therefore serves as a sure aid in diagnosis. In Rötheln the mucous membrane of the cheeks is normal in colour. Simple aphthæ are less intensely red than the spots of measles; nor is the bluish-white speck present. The central yellowish area of fully developed aphthæ is well known. The invasion of influenza resembles that of measles at times; but this characteristic buccal exanthem is absent, the mucous membrane being normal in colour. The author claims the subject of this paper to be absolutely pathognomonic. *Ernest Waggett.*

**McBride, P.**—*Pulsating Vessels in the Pharynx. Notes of Three Cases.* "Edinburgh Med. Journ.," Dec., 1896.

THE first, a lady aged sixty-seven, consulted the author on account of nasal polypi. The right, and, to a less extent, the left, posterior pillar of the fauces pulsated visibly. On palpation an arterial trunk could be traced across the back of the pharynx. The author is not certain whether this trunk could be seen or not. There was a systolic but no diastolic aortic bruit.

The second case was that of a man with a fluctuating pulsating tumour in the region of one tonsil, which, at first suspected to be an aneurism, proved to be a cyst.

In the third case there was tinnitus like the hissing of steam, many of the arteries in the body pulsated visibly, and the right radial ran an abnormal course. In the pharynx pulsation was visible at the junction of the posterior and lateral walls on both sides. The vessel on the left side came more towards the middle line than did that on the right. On the right side the pulsation was communicated to the tonsil.

The paper concludes with a brief reference to some similar cases published by other writers. *A. J. Hutchison.*

**Monnier, U.**—*Aphthous Angina*. "Gaz. Méd. de Nantes," Oct. 12, 1896.

MONNIER relates a case of pseudo-membranous angina appearing on twentieth day in a patient admitted into the hospital for severe burns of body and limbs. The angina was very marked, with fever, cervical glandular hypertrophy. Examination of membrane was negative for Loeffler's bacillus. There were some rare cocci, and a mycelium (*champignon*), which, by culture, demonstrated *oidium albicans*. Rapid cure.

A. Cartaz.

**Morton.**—*Epithelioma of Tonsil and Tongue*. Bristol Med. Clin. Soc., "Brit. Med. Journ.," Nov. 21, 1896.

A MAN was shown from whom the right tonsil, together with the floor of the mouth and the right half of the tongue as far down as the hyoid bone, was removed for epithelioma. After five months there was still no sign of recurrence, and the patient went about his work and could swallow mince-meat.

Ernest Waggett.

**Schamberg, Jay F.** (Philadelphia).—*Severe Stomatitis following the Administration of Potassium Iodide*. "The Medical and Surgical Reporter," July 11, 1896.

A WOMAN, aged fifty-four, consulted the author on account of multiple gum-mata of the tongue and a tubercular syphiloderm of the face. Potassium iodide in five grain doses thrice daily was prescribed. After the first dose she experienced symptoms of conjunctival irritation, and some tenderness of the gums. Six days later the conjunctivæ were injected up to the corneal margin; there was a serous nasal discharge; the patient complained of frontal and malar pain; the saliva dribbled from the mouth; the breath was offensive; the gums were eroded, spongy, and bleeding; there was distinct ulceration along the dento-gingival border, especially of the canine teeth. The iodide was continued in the same dose, and three days later the conjunctivitis was unchanged, while the lesions upon the tongue and face were undergoing rapid involution. The dose of the drug was then reduced to two grains thrice daily, and an eye lotion and mouth wash ordered. From this time on, both the mouth and the eyes improved.

Several authorities are quoted who deny that a severe stomatitis can be caused by iodides. Kaposi, however, admits that in rare cases this may occur. The author eliminates the possibility of the above case having been one of mercurial stomatitis—with which it had the closest resemblance—and supports his view that it was due to the potassium iodide by the fact that the stomatitis appeared concurrently with the other symptoms of iodism.

A. B. Kelly.

**Soffiantini, G.**—*Anatomy of the Sub-Maxillary Gland*. A Paper read before the Lombard Medical Society, Jan. 15, 1896. "Bollet. delle Malattie dell' Orecch.," Giugno, 1896.

THE author bases his results on three hundred examinations, and comes to the conclusion that, in eighty-five per cent. of these, the sub-maxillary gland extends much lower than is generally taught or treated of in anatomical text-books. He finds, in brief, that almost the entire volume of the gland lies in the neck; to express it more exactly, in the posterior half of the lateral supra-hyoid region, corresponding superiorly to the interior pterygoid muscle, its base to the thyro-hyoid membrane and the upper margin of the latter cartilage, and resting on the posterior belly of the digastric muscle, the hypo-glossal hyoid triangle, and the greater horn of the hyoid bone.

This fact is of some importance in surgical procedures involving the gland, and

in ligations of the lingual artery would necessitate an incision lower down than is actually taught.

Although Ricard and Sebileau published their researches on the same subject somewhat prior to a preliminary communication of the author's, and published in the "Scientific Bulletin" of Pavia (Anno XI.), the latter claims the priority of his studies.

*Jefferson Bettman.*

**Wright, Faulconer.**—*A Case of so-called Angio-Neurotic Œdema.* "Brit. Med. Journ.," Sep. 19, 1896.

THE patient, a lady of sixty, has suffered for the last thirty-five years with the formation of localized cedematous swellings, sometimes as large as half an orange, with slight reddening of the skin and pitting on pressure. She is seldom free from an attack for six weeks at a stretch, and there is no marked general disturbance or urticaria. All parts of the body are affected, including the face, the tongue, and, presumably, the trachea and bronchi. In a few hours the tongue has swollen to the extent of making it impossible to shut the mouth; and, in two instances, attacks of dyspnoea, closely resembling true asthma, have occurred.

*Ernest Waggett.*

## NOSE, &C.

**Bois, R.**—*Notes on Fistulæ of the Frontal Sinus.* "Thèse de Paris," 1896; and "Arch. Gén. de Méd.," July, 1896.

FROM the careful examination of thirty-four cases, these fistulæ were found secondary to (1) traumatism; (2) inflammation, acute or chronic sinusitis (the most frequent cause); (3) surgical operation in the region. Their intractability and the rarity of spontaneous cure of these fistulæ is due to the rigidity of the osseous cavity, which is, in fact, a nasal diverticulum. The symptoms are not characteristic: purulent discharge by the nose and the sinus—frequently by the sinus only, on account of obstruction of the passage into the nose; sometimes (one case) escape of air. Catheterism and exploration are necessary for diagnosis. The treatment must be surgical—breaking up one or both walls of the sinus, curettage of the suppurating cavities, and fronto-nasal drainage.

*A. Cartaz.*

**Burnett, Charles H.** (Philadelphia).—*Non-Fetid Ozæna and Chronic Aural Catarrh.* "Philadelphia Polyclinic," Oct. 3, 1896.

THE notes of two cases, mother and child, where there was absolutely no smell from the nasal discharge, although there was an abundant formation of the characteristic crusts and atrophy of the mucous membrane. Both cases were accompanied by tinnitus, and in the mother there was increasing deafness, the ear symptoms being apparently due to ill-regulated nasal douching. The cases improved under the application of thymol in glycerine and alcohol, five grains to the ounce.

*StGeorge Reid.*

**Chandler, H. B.**—*Heterophoria from Nasal Reflexes.* "Ann. Ophth. and Otol.," Oct., 1896.

THE author quotes four cases, viz.—(1) A female of twenty-seven, with headache; hypermetropic astigmatism, exophoria 14°, and hyperphoria 9°. Turbinal hypertrophy was found and relieved, with a diminution of the exophoria to 6° and hyperphoria to 3° in six weeks' time. (2) Male, aged thirty-four, headache, and

exophoria 5°. Intranasal treatment relieved headache, but exophoria increased to 9°, which glasses rectified. (3) Female. Exophoria 5° and headache, both cured by intranasal treatment. The fourth, also cured, was amblyopic on one side with vision one-tenth.

R. Lake.

**De Simoni, Attilio.**—*On the Unvarying Presence of the Bacilli of Diphtheria in Ozæna.* "Bollet. delle Malatt. dell' Orecchio, etc.," Aug., 1896.

THE observations generally accepted on the parasitic nature of ozæna have recently been modified by the researches of Belfanti and Della Vedova, communicated to the Royal Academy of Turin in March last. The exact nature of the large pneumococcus of Löwenberg—although the latter, Marano, Abel, Paulsen, and others regard it as the specific element of ozæna in contradistinction to the latest researches of Belfanti and Della Vedova, who found and described a bacillus bearing all resemblance to the microbe of diphtheria, and only differing from it in degree of virulency—still remains to be established. The latter base their conclusions not alone on the constant occurrence of these bacilli in ozæna secretions, but on the clinical experience of thirty-six cases, either cured or improved by antidiphtheritic serum treatment. According to the author, this fact in itself goes far to confirm the specific nature of the bacilli of Belfanti, etc. To further substantiate this he examined twenty-five cases of ozæna according to the methods described by Belfanti. In all of these, the specimens being stained with Gram-Weigert solution, on repeated examinations he invariably found a small, slender bacillus, almost fusiform in shape, one extremity larger than the other, at times straight, and again bent at a right angle, isolated or in groups, with a tendency to parallel arrangement. He further lays great stress on the staining methods employed. Whilst those coloured with Gram-Weigert solution demonstrated the bacilli in abundance, the latter were wanting or but sparse in quantity in others stained with the usual methods of colouring adopted in bacteriological research. At the same time the author devoted attention to Löwenberg's diplococcus, using the simple method of Ziehl. Thus in all the cases he was able to find the diplococcus present, most numerous in the secretion of those cases of ozæna that had been neglected, or where measures of cleanliness had not been applied. Repeated examination of small pieces of the mucous membrane, removed by scraping and treated according to Belfanti's method, always revealed the presence of the diphtheritic bacilli, and never that of the diplococcus. According to numerous observations, the latter have only been found either free in the secretion or but adhering to the mucous membrane. According to this fact and the presence of both types of micro-organisms no deductions can as yet be formulated. Time and clinical experience alone can decide what influence they have in the etiology of ozæna.

Jefferson Bettman.

**Dickermann, E. T.**—*Nasal Papilloma or Papillary Fibroma.* "Ann. of Ophth. and Otol.," Oct., 1896.

A COMPLETE *résumé* of the subject, with a careful differentiation between true and pseudo papillomata, together with a case. The patient, a man of sixty-two years of age, gave a history of nine years' right nasal obstruction. The right nostril, from the vestibule to the posterior choana, was filled with a pinkish cauliflower mass. It arose from the upper and anterior portion of the quadrangular cartilage. The growth was removed, with part of the thickened septum, by means of scissors, and part with the cold snare, and up to the present time there is no recurrence (since May, 1896). The microscope proved the growth to be a true papillary fibroma.

R. Lake.

**Dionisio, Prof. J.**—*Rare Forms of Tertiary Nasal Syphilis.* "Gaz. Med. di Torino," June 11, 1896.

THIS condition is rarely or but slightly treated of in most handbooks on diseases of the nose. The three cases presented by the author have a certain importance in showing that tertiary syphilis of the nose may demonstrate itself by a simple tumefaction of the mucous membrane, running its course without any signs of ulceration or purulent secretion. This initial period of tertiary infiltration may exist some time before degenerating into the characteristic ulcerative type. Accordingly, it is of importance to distinguish this form from the various conditions requiring surgical interference; it, itself, is very amenable to specific treatment.

*Jefferson Bettman.*

**Goodall, J. L.** (Massachusetts).—*An Experimental Study of the Respiratory Functions of the Nose.* "Boston Med. and Surg. Journ.," Nov. 5 and 12, 1896.

THE author deals at length with the question of the action of the nasal mucous membrane upon respired air with regard to heat and moisture, with the alteration in intranasal air pressure during the respiratory act, and with the normal route taken by respired air within the nose. With regard to the question as to the rise of temperature within the nose of inspired air, he finds that at 1° C. to 5° C. atmospheric temperature the air is raised in the nose to 28° C., and with 21° C. to 25° C. external temperature it is raised to 31° C. to 32° C.

As to the accession of moisture. With an atmospheric absolute humidity of 1.4 grammes of vapour at 1° C., the nose evaporates 25.6 grammes of water per cubic metre of air; while with practically the same humidity at 25° C. there are evaporated 24.8 grammes of water. In experimenting on intranasal air pressure the author used a water manometer in place of a mercurial, water being thirteen times lighter than mercury; the excursions of the column of water were therefore thirteen times greater than those of a column of mercury. On placing the manometer in connection with the healthy naso-pharynx of an adult the following figures were obtained as a mean after numerous trials:—

|                   |                     |       |
|-------------------|---------------------|-------|
| Quiet respiration | { Inspiration ..... | 6 mm. |
|                   | { Expiration .....  | 4 "   |
| Deep respiration  | { Inspiration ..... | 30 "  |
|                   | { Expiration .....  | 20 "  |

The author then proceeds to deal with the variation in these figures caused by pathological changes in the nasal passages, and raises the question as to how far the variations in air pressure affecting the intranasal blood supply and nutrition may be a factor in the production of the facial peculiarities of subjects of adenoid disease. He found, as regards the direction taken by the air within the nose, that it was first deflected by the *alæ* against the septum, and then passed upwards against the anterior end of the middle turbinate and along the middle meatus.

*St George Reid.*

**Fränkel, B.** (Berlin).—*Tampon Carrier for the Naso-Pharynx.* "Archiv für Laryng. und Rhinol.," Band 4, Heft 3.

THIS instrument is the same as B. Baginsky's, excepting that, instead of being angular, it is curved to suit the naso-pharynx, as, *e.g.*, in Gottstein's curette.

*A. B. Kelly.*

**Guamaccia, E.**—*Bacteriological Researches upon Caseous Rhinitis.* "Archiv. Ital. di Laringologia," fasc. 4, 1896.

BACTERIOLOGICAL studies upon a case of caseous rhinitis observed by Prof. Massei in his ambulatorium, undertaken by Dr. Guamaccia, and under the control of

Prof. de Giaxa, to prove that the micro-organism variously described by Perier, Sabrazis, and others is the streptothrix alba, described by Rossi, Doria, Cohn, and Garperini under the name of streptothrix Foersterii.

Dr. Guamaccia was able to cultivate it in agar, gelatine, bouillon, blood-serum, potatoes, and milk; and though inoculations did not succeed, it is probable that the large mass which represents the caseous product is no other than the growth of the streptothrix, which has only been differently interpreted. *Massei.*

**Hajek, M.** (Vienna).—*On the Pathological Changes in the Ethmoid Bone in Consequence of Inflammatory Hypertrophy of the Mucous Membrane and Polypi.* "Archiv für Laryng. und Rhinol.," Band 4, Heft 3.

**I. History.**—Commencing with E. Woakes's communication in 1885 on "necrosing ethmoiditis," in which the relations of the diseased nasal mucous membrane to the underlying bony structures were first pointed out, the author gives a critical account of all that has since been written on the subject.

**II. The Material for the Investigation.**—This was obtained entirely from the living subject. The pieces included bone and mucous membrane, and most of them consisted of hypertrophied anterior ends of middle turbinates. These represented:—1. Hypertrophies which owed their origin to a genuine catarrh of the mucous membrane without other evident complications (five cases). 2. Hypertrophies which appeared in the course of muco-purulent and purulent inflammations of the accessory cavities (seven cases). 3. Hypertrophied middle turbinates with polypoid vegetation on the outer side, and at the same time in the middle meatus (five cases). 4. Polypi, with their bony attachments obtained by evulsion; eight of the growths were from cases in which there was suppuration of the accessory cavities, while in four instances there was no such complication.

**III. Contribution to the Normal Anatomy of the Ethmoid.**—The condition of most importance to us is the intimate relation of the mucous membrane covering to the marrow-like substance lining the cavities in the bone. On the concave side of the middle turbinate the deep layers of the mucous membrane sink uninterruptedly into the large lacunæ which are present in places. These lacunæ are more numerous, and consequently the connection between mucous membrane and medullary substance more intimate, where the middle turbinate is continued into the wall of the ethmoidal labyrinth.

The structure of the medullary substance and of the periosteum are described, also the conditions peculiar to the bulla ethmoidalis and uncinat process.

The author shows by his researches that the mucous membrane and bone (including the medullary substance) form an anatomical entity. This is further supported by the fact that all the structures are supplied by the same arterial branch.

**IV. Examination of the Middle Turbinate and other Parts of the Ethmoid which have undergone Chronic Inflammatory Changes.**—These changes vary with the severity and duration of the inflammation, and have therefore been considered under the following heads:—1. Superficial inflammation, in which only the superficial layers of the mucous membrane are affected. 2. Deep inflammation, when the soft tissues between the bony trabeculæ are also involved. 3. Inflammatory changes of the whole involucrum. This classification is quite arbitrary, for, in the same specimen, different stages of the affection may be present in different situations; besides, there are numerous transitions.

**1. Superficial Inflammation.**—If the mucous membrane of a slightly hypertrophied middle turbinate is examined, the inflammatory infiltration is found at most places confined to the superficial layers. Here and there, however, it extends to the glandular layer, and even to the periosteum.

The superficial inflammations are known clinically as simple hypertrophy ; they are either the result of diffuse catarrhs or of affections of the accessory cavities, the discharge from the latter keeping up a constant irritation of the mucous membrane of the middle turbinate. Simple hypertrophy is only of interest as the beginning of the later stages in which the periosteum and bone are involved.

The histological appearances in this stage, as also in the more advanced, are fully described by the author.

2. *Deep Inflammation of the Middle Turbinate (Inflammation of the Medullary Substance).*—In this stage the infiltration extends to the glandular layer, the periosteum, and medullary spaces, which it more or less fills.

Clinically, this stage includes cases of marked polypoid degeneration, and the majority of those in which hypertrophy has been associated with empyema or with polypi ; deep inflammation may be present, however, without any apparent external indication.

From the examination of three cases of deep inflammation of the middle turbinate—in which œdematous vegetations resembling polypi were found on the concave side, while the ordinary form of dense hypertrophy was present on the convex side—the author holds that there is no essential difference between dense hypertrophy and œdematous hypertrophy, which is the structure of polypi.

In deep inflammation of the middle turbinate, the periphery, therefore, is first affected, and subsequently the medullary spaces. The opposite view, viz., that the tissue proliferates from within the medullary spaces, is disproved by the fact that here and there the mucous membrane on the surface has undergone œdematous hypertrophy, while no trace of inflammation can be detected with the microscope in the spongy spaces.

3. *The Implication of the Bony Parts of the Ethmoidal Labyrinth.*—This may be manifested in two ways, viz., by new formation (six cases), and by absorption (three cases).

(a) The new formation of bony substance results from the congestion of the periosteum and consequent formation of osteoblasts. The new bone is deposited diffusely or in circumscribed projections. In the same way bony substance may be developed in the medullary spaces, leading sometimes to their narrowing. These changes are not always recognizable on making a microscopic examination. It is not invariably the voluminous middle turbinates that are most affected. Only in those cases in which thin spinous processes are formed is the resistance to probing deficient, and a crackling produced.

The new formation of bone takes place at different spots on the same preparation to different degrees. In two middle turbinates the author found all the stages, from superficial inflammation to deep inflammation and new formation of bone, proving that the inflammation begins on the surface.

(b) *Rarefying Osteitis.*—In three middle turbinates which presented the symptoms of deep inflammation, marked bony absorption was observed.

Numerous osteoclasts appear in Howship's lacunæ, and the bony trabeculæ become eroded and gradually thinner. These changes may advance so far that the trabeculæ are broken down into irregular loose pieces. In this way the bony foundation of the turbinate may come to be made up rather of a number of loose fragments than of a connected bony framework.

In most of the specimens new formation of bone and absorption changes were found going on side by side, sometimes the one predominating, sometimes the other. It is difficult to explain with certainty why hyperplasia chiefly takes place in one case and absorption in another : possibly, the former may be due to the congestion of the periosteum, while the latter may follow the stagnation caused by

compression of the veins by the inflammatory infiltration. The final result will depend upon the predominance of the one or other factor.

If we now consider the clinical picture presented by Woakes—the thickening of the middle turbinate, the appearance of bony plates which offer but slight resistance, and the subsequent growth of polypi—it must be said that this observation, as such, is not at all remarkable, for it corresponds to the changes described above.

The term “necrosing ethmoiditis” is inadmissible, however, for two reasons:—

1. Because the presence of friable bony plates does not always indicate a necrosis, this quality of friability belonging also to bone which has become thin by absorption, and to newly-formed bony plates. 2. Because the term does not characterize the nature of the affection; the necrosis being merely one of a series of changes, it is never to be regarded as the cause, but as one of the consequences, of the deep inflammation. If a term is necessary, “ethmoiditis profunda” would be much more suitable.

V. *Examination of Polypi and their Bony Attachments.*—The examination of the bony attachments of twelve polypi yielded essentially the same result as in the hypertrophied turbinates. In five of the polypi nothing abnormal was observed at the bony insertions, excepting in those specimens in which the periosteum had undergone cellular infiltration. At three of the attachments there was hyperplastic bone formation, while in some situations there was young bone, *i.e.*, large bony cavities with relatively scanty substance between, and with numerous osteoblasts; in three preparations, however, there were distinct signs of absorption.

The author compares his results with Martin’s, Luc’s, and Zuckerkandl’s, with all of which they partly agree.

He then points out that what he has stated proves rarefying osteitis and hyperplastic bony change to be merely accessory and secondary conditions in the development of polypi. A polypus is merely an œdematous hypertrophy of the mucous membrane, in which, as also in the firm hypertrophies, the process is either confined to the superficial layers or passes more deeply. Woakes’s theory that necrosis is the cause of polypi is a mistake. That writer deserves, nevertheless, the credit of having given an impulse to the study of polypi and of the pathological anatomy of the ethmoid, and of having added considerably to our knowledge of these subjects by his publications.

The article is illustrated by beautifully executed drawings of microscopic sections.  
A. B. Kelly.

**Hamilton, T. K.** (Adelaide).—*A Case of Bilateral Empyema of the Frontal Sinus.* “Australasian Medical Gazette,” May 20, 1896.

A WOMAN, aged thirty-six, had experienced pain over the left frontal region for two years. Six months previously an abscess was opened under the orbital arch; since then a fistula had persisted. Bare bone was felt on the floor of the sinus. In the middle line above the root of the nose there was a puffy swelling, pressure upon which caused pus to flow into the right middle meatus, but none into the left. Both nasal cavities were normal. Empyema of both frontal sinuses was diagnosed. A median incision was made, commencing below the glabella and passing upwards for two inches, the periosteum was pushed aside, and the trephine (half-inch) applied at the point where a line on a level with the upper margins of the orbits intersects the median vertical line. Both sinuses were thus exposed, and contained granulations and pus. After thorough curetting, the walls of the cavities were carefully examined and a large mass of dead and partially loosened bone was found on each floor and removed. These sequestra

represented considerable portions of the orbital plates. The infundibula were then cleared, and a piece of drainage tube extending from the external wound to the nasal orifice was introduced. The operation was followed by complete and permanent relief from pain. On the third day, in order to allow perfect union of the margins of the wound to take place, the drainage tubes were withdrawn from the wound, the ends being pulled down into the sinuses under each orbital arch, and tied in as before. Daily irrigation was the only treatment afterwards employed, and when all discharge had ceased for about a week the drainage tubes were removed. Three days later, when the patient was exhibited, the central wound had united and the opening above the right sinus had closed. That above the left still remained open, and by syringing through it, fluid could be readily made to pass down both nostrils.

A. B. Kelly.

**Hansell, Howard F.** (Philadelphia).—*A Case of Acute Loss of Vision from Disease of the Ethmoid and Sphenoid Cavities.* "Med. and Surg. Reporter," July 25, 1896.

A LAD, aged seventeen, awoke one morning with severe frontal headache and an almost absolute loss of vision. He had gone to bed the night before in his usual health, free from any disturbance of sight. During the week following the onset of the attack his vision became worse and his mental powers somewhat dulled, but the excruciating headache passed off.

On examination of the eye, dilated pupils which were unresponsive to light, punctate hyalitis, and oedema of the retina with detachment towards the periphery were detected. In the absence of an assignable cause for the ocular and cerebral oedema the condition of the nose was investigated. It was found to be completely blocked anteriorly by greatly swollen turbinates, while posteriorly muco-pus flowed from the choanae. On further examination pus was observed to issue from the superior and middle meatuses of both sides, and from the upper and back part of the left fossa; the maxillary and frontal sinuses proved to be normal. The disease was diagnosed as acute purulent inflammation of the anterior and posterior ethmoidal cells on both sides, and of the left sphenoidal sinus. Atropine internally, with appropriate local treatment of the intranasal congestion, quickly caused the inflammation to subside.

Notwithstanding the nasal treatment whereby a cure of the ethmoidal and sphenoidal disease was effected, the improvement in vision has been slight. The fields have gradually enlarged and now include the unbroken periphery, in which light projection has returned, and the fingers can be counted on the temporal sides, but a large central scotoma persists. The pupils have become responsive to light. The optic nerves have markedly atrophied and the retinae degenerated.

The author thinks the least satisfactory explanation of the ocular complication is that of a localized meningitis, accompanied by marked swellings and oedema of the periosteum covering the body of the sphenoid, induced by purulent disease of its cells through contiguity of tissue.

It is worthy of note that in this case the symptoms common to ocular involvement in disease of the nasal cavities were in large part absent.

A. B. Kelly.

**Herck.**—*Note on the Treatment of Abscess of the Septum.* "Archiv. Internat. Laryngol., Rhinol., Otol.," July-Aug., 1896.

To prevent closure of the incision, the author recommends that loops of horsehair be introduced, reaching the deepest part of the cavity. These may be withdrawn one by one to permit of healing and obliteration of the cavity. Strips of gauze are apt to be expelled prematurely.

Ernest Waggett.

**Knight, C. H.**—*Supplementary Note on a Case of Martin's Bridge for Depressed Nose.* "New York Med. Journ.," Dec. 19, 1896.

THIS note concludes the report of a case which was eminently satisfactory at first, but in which cicatricial contraction of the nares demanded operative measures in the author's absence, and the patient was given a vulcanite tube to keep the passage patent. This tube was used by the patient himself, and by the force used not only displaced the bridge, but caused it to ulcerate through the skin. The author proposes further treatment, and notwithstanding these unexpected troubles maintains his confidence in the method in proper cases. R. Lake.

**Krebs, G.** (Hildesheim).—*Remarks on the Exploratory Puncture of the Maxillary Sinus and the "Serous Affection" of this Cavity.* "Archiv für Laryng. und Rhinol.," Band 4, Heft 3.

1. THE author inquires whether the exploratory puncture of the antrum of Highmore is quite harmless. The procedure is employed chiefly in cases of nasal suppuration, in order to discover the source. Asepsis in the nose being impossible, a healthy antrum may become affected. A number of cases in which operative measures in the nose have led to suppuration in the antrum have been described, although there is no instance on record, to the author's knowledge, in which exploratory puncture of the antrum led to its infection. He regards as suspicious, however, the reference of Noltenius to "an almost clear serous fluid which "subsequently became cloudy and then purulent"; also Grünwald's statement that in some cases he explored the antrum four times before he found pus. Grünwald holds that exploratory puncture with a negative result proves nothing. The author, on the other hand, points out that in antral empyema, pus is always present in the cavity, so that when exploratory puncture yields a negative result we have conclusive proof that the antrum is unaffected.

2. While surgical principles point to the inferior meatus as the proper place for perforating when we have the treatment of the antrum in view, the author reminds us that for exploratory purposes the middle meatus is better suited, owing to the thinness of the wall.

3. In consequence of frequent trial puncture, a new form of disease has appeared—the "serous affection" of the antrum, as described by Noltenius. Since the publication of this writer's paper, the author has found serous contents in the antrum in two cases. In both there was empyema of the frontal sinus of the same side. As none of the subjective or objective symptoms could be attributed to this "serous affection," it was not treated. In both cases, after a week, the antrum was again punctured, and found empty. In one of the patients this procedure was repeated a year later, with a similar negative result. These cases do not explain the significance of the temporary collection of serous exudation in the antrum; they show, however, that the disease does not call for any operative interference. A. B. Kelly.

**Makuen, G. Hudson** (Philadelphia).—*An Unusual Alveolar Abscess, with Antral Complications.* "Med. and Surg. Reporter," July 25, 1896.

A MAN, aged forty, consulted the author in regard to pain in the gum covering the buccal surface of the first molar tooth of the upper jaw on the left side. The teeth were healthy; there was slight redness at the seat of pain.

A week later a scanty discharge of thin pus appeared from beneath the gum along the tooth. Under the supposition that the pulp at the apex of the root was diseased the tooth was opened, but found to be healthy. It now appeared

that there was an abscess external to the tooth substance, probably situated at or near the bifurcation of its roots. The crown of the tooth was therefore drilled through, but no collection of pus was discovered.

Subsequently, when exploring the seat of the trouble, the probe passed into the antrum. The inflammation now rapidly extended upwards, and within three days there was acute inflammation of this cavity, the left nasal fossa, and post-nasal space. In spite of syringing the antrum from the alveolus, the inflammation became very severe, so that the affected tooth had to be removed. A small pus sac was then found in the peridentium of the inner margin of the anterior buccal root, about midway between its apex and base. The sac was so insignificant that at first it was not regarded as the sole cause of the disturbance, but on further examination the tooth was found to be quite healthy excepting at this small spot, while no disease was found in the alveolar cavity. Further, the discharge from the cavity ceased, and within three days the antral inflammation subsided and the patient was practically well.

*A. B. Kelly.*

**Martin, E. D.**—*A Case of Sarcoma of the Superior Maxilla, with Complete Relief of Deformity by Artificial Apparatus.* "New Orleans Med. and Surg. Journ.," July, 1896.

A PHOTOGRAPH is given of the excellent appearance obtained by means of a suction palate-plate, bearing teeth, together with an addition to fill the large cavity left after removal of a considerable portion of the superior maxilla.

*Ernest Waggett.*

**Maxwell, P. W.**—*The Effects of Nasal Obstruction on Accommodation.* "Brit. Med. Journ.," Sept. 26, 1896.

THE ocular defect produced was accommodative asthenopia, sometimes complicated with a secondary blepharitis. Five cases were recorded in which nasal treatment had relieved the defect. In the author's opinion habitual mouth-breathing was of more importance than the nasal condition itself.

Dr. RAYNER BATTEN considered that nasal conditions were responsible for myopia as well as impaired accommodation, and described fundus changes often associated with nasal disease apart from actual obstruction. He considered the asthenopia to be probably mainly congestive, and stated in support that during forced expiration, with nasal obstruction, slight myopia occurred, and slight hypermetropia on inspiration. Compression of the veins of the neck also produced myopia.

*Ernest Waggett.*

**Moure, E. J.** (Bordeaux).—*The Pathology and Treatment of Deviations and Spurs of the Nasal Septum in Young Children.* "New Orleans Med. and Surg. Journ.," July, 1896.

ALTHOUGH, as Zuckerkandl has stated, true septal deviations do not commence to develop until the age of seven—that is, at the time of the evolution of dentition—yet in children below that age septal deformities are to be found. The author believes these to be due to luxation, by traumatism, of the cartilaginous septum from the shallow groove in the superior maxilla into which it fits, complicated by subsequent thickening. Such a luxation can be readily produced experimentally in the cadaver. The deformity may be such that while the luxated end obstructs one nostril, the other nostril may be occluded by the convexity of the bent cartilaginous septum.

Although this variety is due to falls and blows, traumatism plays a purely secondary and accessory rôle in deviations developing in the course of the evolution of the superior maxilla, *i.e.*, in children over seven. In the cases of simple luxa-

tion the septum may be forcibly replaced, or gradually brought into position by the *redresseurs* devised by Delstanche. This treatment may require several months, but gives very satisfactory results.

Where the dislocation is complicated by antero-posterior fracture of the cartilage, with consequent spur-like ridge and corresponding groove, the *redresseurs* are useless. Surgical removal of the ridge must, however, be undertaken with great hesitation, necessitating as it does a weakening of the support on which the contour of the organ depends, at a time when evolution is taking place and when the support is most needed. The author says that, in spite of the greatest precautions, he has almost always seen, after a year or two, the cartilage continue to sink and the respiratory difficulties to reappear. Rather than interfere with the ridge it is sometimes preferable to obtain permeability by perforating the deflected septum.

Ernest Waggett.

**Moure, E. J.** (Bordeaux).—*The Influence of Disease of the Nose and Accessory Cavities on the General Health.* "New Orleans Med. and Surg. Journ.," July, 1896.

IN speaking of hypertrophic rhinitis and ozæna in relation to general health, the author draws attention to the frequent co-existence of atrophic rhinitis with tubercular disease. The enlargement of the nasal cavities, and especially their cutanization, would appear to permit of the penetration of the tubercle bacillus into the respiratory passages. Attention is called to the adenoidian appearance of children affected with nasal spurs, but with no post-nasal growths. Disease of the accessory sinuses may be responsible for the recurrent attacks of erysipelas so frequent in women at the catamenial period. The sinister import of a fœtid suppuration—such as a maxillary empyema—is greatly enhanced by any general illness. It constitutes a focus of septic disease capable of inoculating other points in the organism when the latter is depressed by fatigue or general trouble.

Ernest Waggett.

**Mulford, H. J.**—*Therapy in Acute Rhinitis.* "Amer. Med. Surg. Bulletin," Nov. 21, 1896.

THIS is a protest against the classical treatment of cold in the head.

Acute rhinitis is due to the accumulation in the blood of the products of tissue waste. This is brought about in two ways: (1) there is produced a local retardation of cell activity, as a result of which there are thrown into the circulation the products of a faulty tissue chemistry; (2) through the nervous system the function of remote organs—chiefly liver and kidneys—is interfered with and lessened. Urea, uric acid, and other by-products of tissue change, accumulate in the blood and irritate by their presence, as also by their reducing the alkalinity of the blood.

The treatment, then, is obvious: calomel or podophyllin to stimulate hepatic activity; alkalis—such as lithia, sodæ bicarb., etc.—to "overcome the condition of the blood"; and a free supply of water, to set the kidneys going. Pilocarpin would be an ideal drug, were it reliable; but its action is not always sure, especially when given by the mouth.

Lithæmic rhinorrhœa often simulates acute rhinitis, clinically. Examination of the nose, however, will clear up the diagnosis. This is a diathetic condition; consequently, special attention must be paid to treatment of the diathesis.

A. J. Hutchison.

**Palazzolo, N.**—*Leech in the Larynx removed through the Mouth.* "Bollet. delle Malatt. dell' Orecchio, etc.," Nov., 1896.

THE case was one of a large *hæmopsis verax* implanted on one of the ventricles and successfully removed with laryngeal forceps. The author comments upon the

frequency of such accidents in Sicily, for of sixteen Italian cases thirteen belong to the island. The leech remained in the larynx for ten days. *Massei.*

**Pyncheon, E.** — *Dobell's Solution.* "Ann. of Ophth. and Otol.," Oct., 1896.

THE author has collected the following twenty-one solutions, giving their source. No. 14 is the original solution, but he himself uses No. 1, using the following prescription:  $\mathfrak{zj}$ . to Oj. of water.  $\mathfrak{R}$ . Sod. bibor., sod. bicarb.,  $\text{aa } \mathfrak{z}\text{ij}$ . ; listerine Oss., glycerine Ojss. m.

FORMULÆ FOR DOBELL'S SOLUTION AS GIVEN BY VARIOUS  
AUTHORITIES.

|    | Sodæ, Bibor. |     | Sodæ, Bicarb. |     | Acid, Carbolic. | Glycerine.      | Water. |
|----|--------------|-----|---------------|-----|-----------------|-----------------|--------|
| 1  | Grs.         | 30  | Grs.          | 30  | Grs. 15         | Drm. 4          | Pt. 1  |
| 2  |              | 32  |               | 32  | 16              | 8               | 1      |
| 3  |              | 32  |               | 32  | 16              | 16              | 1      |
| 4  |              | 32  |               | 32  | 16              | $21\frac{1}{2}$ | 1      |
| 5  |              | 40  |               | 40  | 32              | 8               | 1      |
| 6  |              | 60  |               | 30  | 12              | 16              | 1      |
| 7  |              | 60  |               | 60  | 45              | 8               | 1      |
| 8  |              | 60  |               | 60  | 45              | ...             | 1      |
| 9  |              | 71  |               | 71  | 14              | 14              | 1      |
| 10 |              | 78  |               | 78  | 21              | 4               | 1      |
| 11 |              | 96  |               | 96  | 38              | $2\frac{3}{4}$  | 1      |
| 12 |              | 96  |               | 96  | 32              | $5\frac{1}{2}$  | 1      |
| 13 |              | 116 |               | 116 | 23              | $4\frac{1}{2}$  | 1      |
| 14 |              | 120 |               | 120 | 48              | $3\frac{1}{2}$  | 1      |
| 15 |              | 120 |               | 120 | 24              | 4               | 1      |
| 16 |              | 120 |               | 120 | 24              | 8               | 1      |
| 17 |              | 120 |               | 120 | 24              | ...             | 1      |
| 18 |              | 127 |               | 127 | 27              | $6\frac{1}{2}$  | 1      |
| 19 |              | 240 |               | 240 | 80              | 14              | 1      |
| 20 |              | 240 |               | 240 | 120             | 14              | 1      |
| 21 |              | 480 |               | 480 | 180             | 29              | 1      |

*R. Lake.*

**Thelwall, Thomas.**—*Exostosis of Frontal Sinus.* "Brit. Med. Journ.," Oct. 17, 1896.

A REPORT of a case in a woman of forty-six, who ascribed the trouble to a blow thirteen years previously. The growth was an ivory exostosis springing from the inner wall and herniating into the orbit. Dura mater formed the roof of the sinus. *Ernest Waggett.*

## LARYNX.

**Biaggi, C.**—*Some Considerations on so-called Eunuch's Voice.* A Paper read before the Lombard Medical Association, May 30, 1896. "Bollet. delle Malatt. dell' Orecch.," Oct., 1896.

DUE to some change or arrest of development of the larynx at the period of puberty, the voice retains its infantile character, or presents alterations more or

less marked, according to the duration of the abnormal condition. The voice resembles the characteristic quality of those individuals castrated before puberty, and thus justifies the appellation. The author distinguishes two varieties: vocal disturbances occurring in normal persons, and in those following castration. He further describes two cases in which complete cure followed the removal of obstructions to free nasal respiration.

Jefferson Bettman.

**Chosen, L.**—*Upon the Value of Calomel Subcutaneous Injections for Laryngeal Syphilis.* "Arch. Ital. di Laring.," fasc. 4, 1896.

A VERY instructive case, in which the great efficacy of the above-mentioned treatment is clearly shown. The patient had severe stenosis of the larynx, which seemed to require tracheotomy, and not only was this avoided, but the patient completely recovered under the treatment.

Massei.

**Downie, J. Walker.**—*An Account of Eight Consecutive Cases of Thyrotomy (Cricoid-Thyrotomy), with One Death, for Removal of Intralaryngeal Growths, etc.* "Glasgow Med. Journ.," Oct., 1896.

THIS short paper is accompanied by a table giving particulars of the cases under the headings of sex, age, occupation, history, etc., of which the following is an abstract.

Of the eight cases three were forty-two years old and upwards; the rest were ten years and under, the youngest being one year and eleven months.

The one fatal case was that of a labourer aged fifty-three. The operation was done to relieve urgent dyspnoea. The laryngeal growth was a fibroma. Death occurred on the fourth day after operation from septic pneumonia. Of the other two old cases, one, aged forty-two, suffered from slight cough, hoarseness, and shortness of breath on exertion; later, urgent dyspnoea. The tissues removed were oedematous granulation tissue from subglottic region, and muscular and cicatricial tissue. This the author considers was probably a case of inherited syphilis. The patient died twelve months later from oesophageal stricture. The third old case was one of typical epithelioma (published already in "Brit. Med. Journ.," Vol. I, 1894). Since the operation he has been steadily at his work (*i.e.* three and a half years). The voice is rough, but good and strong.

Of the cases in children three were cases of papilloma, one of hypertrophied and oedematous mucous and submucous tissue, and one of mucous polypus arising from trachea about level of second ring. Owing to the length of the pedicle the polypus was very freely movable, and gave rise to inflammation and spasm of the larynx, which, on two occasions, nearly ended fatally.

The youngest case, a child one year and eleven months old, suffering from papilloma of larynx, was operated on on 25th January, 1895; again on 8th February, on 21st May, on 6th September, on 27th November, and on 2nd December. The age of the patient, the size of many of the growths removed, the extent of the surface affected, and the rapidity and frequency of recurrence of the growths, make the case a remarkable one.

In all the cases except one tracheotomy was performed, without much preparation, to relieve urgent dyspnoea, and not as a special preliminary to thyrotomy. Nevertheless, the author looks upon a preliminary tracheotomy as a wise procedure, as it permits the patient to become accustomed to the use of the tube some days prior to the performance of the major operation.

The tracheotomy wound is continued upwards through the cricoid and part of the thyroid in the middle line; then the incision is carried obliquely into one ala, near the upper border, and back to the middle line again; so that, by dovetailing

the parts together after the operation, an accurate reposition of the cords is secured.

The author prefers the use of small sponges or gauze, to mop up the blood, to the use of Trendelenburg's or Hahn's tubes, during the operation.

After carefully removing all the growth, etc., the larynx is packed with gauze and held together with strips of adhesive plaster, and the tracheotomy tube reintroduced. Next day the packing is removed, all suspicious points are cauterized, the cut edges of the cartilages brought accurately together and fixed in position by one or more sutures; then the skin incision is stitched. If all is well, the tracheotomy tube may be removed on the second or third day.

*A. J. Hutchison.*

**Downie, J. Walker.**—*A Pin in Larynx, localized by the Röntgen Rays and removed by External Operation.* "Glasgow Med. Journ.," Nov., 1896.

THIS was the case of a lad, aged nineteen, who had put a pin into his mouth while in bed, and had forgotten about it till he swallowed the first mouthful of his breakfast next morning. He then felt a sharp, tearing sensation in the back of his throat; then continuous pain deep in right side [of neck, at level of and behind upper border of the cricoid. Laryngeal symptoms were very slight; swallowing produced sharp pain, and for some days slight hæmorrhage. Examination revealed swelling and redness of right side of œsophagus, of right pyriform sinus, and of right side of larynx. No foreign body could be found.

A transverse photograph by X rays showed a pin, but an antero-posterior photo could not at that time be obtained. The level of the pin was indicated by the photo; the patient referred all his painful sensations to the right side of the neck; an exploratory operation was therefore carried out there, but nothing found.

Later on, with better apparatus, both a transverse and an antero-posterior photo were obtained, and the position of the pin accurately determined. It lay in the ventricle of the larynx, the head anteriorly and the point in the fourth inter-vertebral disc. The thyroid was then cut down on in the middle line, the head of the pin, which was ulcerating its way through the cartilage, was seen and grasped, and the pin removed.

The X rays produced no discomfort at the time, but ten days later pricking and heat were complained of over the back of head and neck, then followed vesication and sloughing of the skin, and falling out of the hair over a large area.

*A. J. Hutchison.*

**Escat.**—*Laryngoscopy in Children.* "Arch. Internat. Lar., Otol., et Rhin.," No. 5, Tome IX.

THE author describes the method of examining, by the classical laryngoscopy, young children who are frightened or rebellious. His special instrument is conceived on the principle of a retractor, and serves, by pulling forward the base of the tongue, to open the pharynx antero-posteriorly.

It consists of a tongue depressor, of which the extremity has a downward bend to adopt it to the outline of the dorsum of the tongue. To the extremity is fixed a two-pronged fork, which is curved in such a manner that the knobbed ends of the prongs can reach the sinus pyriformis on either side of the larynx. When in position the fork does not touch the epiglottis, but closely hugs the root of the tongue. Forward traction is then made, while a mirror—preferably a square one with a rigid shaft—is firmly pressed back against the posterior wall of the pharynx. An assistant to hold the child is, of course, indispensable.

The author has employed the instrument for two years, and with success, in the most rebellious cases.

*Ernest Waggett.*

**Getchell, A.** (Worcester, Mass.).—*A Contribution to the Study of Laryngeal Vertigo*. "Boston Med. and Surg. Journ.," Nov. 5, 1896.

THE notes of two cases of laryngeal vertigo. In the first case, that of a man, aged fifty-four, who complained of intense headache, the vertigo was accompanied by fits of coughing and a tickling sensation in the larynx. Sometimes the paroxysms would be of considerable severity, but they were not accompanied by loss of consciousness or falling. On examination, in the nose was found a deviated septum with exostosis; there was chronic naso-pharyngitis, relaxed uvula, and inflamed tonsils, the left being covered with a greyish exudation. The vocal bands met in the median line in phonation; the left seemed thinner than the right, and was more overlapped by the ventricular fold. There were a few bronchial râles in the chest. He improved under treatment, by astringents to the naso-pharynx.

In the second case, a male, aged twenty-nine, the duration of the cough was six weeks. It was very violent at times, and once he lost consciousness, and fell. There was a tickling sensation in the throat, just below the larynx. On examination, in the nose there was a prominent exostosis, with inflammation of the mucous membrane. There was also chronic naso-pharyngitis, enlarged tonsils, enlarged lymph follicles at the base of the tongue, and hyperæmia of the larynx.

StGeorge Reid.

**Heymann.**—*A Contribution to the Study of Toxic Paralyses of the Larynx*. "Arch. Internat. de Lar., Otol., et Rhin.," No. 6, IX., 1896.

THIS extensive *résumé* of the literature of laryngeal paralysis due to poison, containing references to over fifty papers, will be of great value to students of the subject. Lead poisoning is responsible for the majority of the cases, and the author adds three to the number already published. Contrary to the opinion expressed by Mackenzie (whose reported case contrasts with the rest in this respect), the author shows that it is the abductor muscles which are mainly affected. In his own cases these alone were paralyzed. Poisoning by copper, antimony, phosphorus, and arsenic has been responsible for a small number; and the author has met with three instances of arsenic paralysis which, after temporary disappearance, recurred on re-exposure to the influence of the poison. Laryngeal palsy has also been attributed to various organic poisons—such as, cannabis indica, atropine, morphia, alcohol, etc.

Ernest Waggett.

**Hillis, T. J.**—*The Technics of Intubation in Children; some Remarks on the Time for Operation and After-Treatment*. "New York Med. Journ.," Dec. 5, 1896.

THE author recommends wrapping the child in strong muslin, as it affords more room than the blanket. In introducing the tube the horizontal position often economizes room whilst passing it through the mouth. Also in children under one year old the tube can be expressed from without. One should err on the side of keeping the tube in rather too long than the reverse. In after-feeding the best position is lying on the stomach, and the next best lying on the back with the head lower than the body.

R. Lake.

**Jousset.**—*Cystic Tumour of the Epiglottis*. "Nord Médical," Oct. 1, 1896.

DETAILS of a case of cyst in the glosso-epiglottic fold in a patient sixty-nine years of age. The tumour was as large as a small nut, and compressed the epiglottis; it caused hoarseness, dyspnœa. After incision, a discharge of yellow, gummy fluid followed, formed of fatty detritus. Rapid cure.

A. Cartaz.

**Masini, Prof. G.**—*Hypoesthesia of the Larynx.* "Bollet. delle Mal. dell' Orecchio, etc.," June, 1896.

THIS term was first applied by Elsberg to a condition of diminished functional sensibility of the larynx, independent of any impairment of the peripheral nerves, or symptomatic manifestations of disease of other organs. It is a neurosis so rarely met with and observed that few of the modern writers, such as Mackenzie, Gottstein, and Schmidt, ever allude to it. Experimental studies of the state of sensibility of the larynx in various individuals and in its various parts have still to be made, which may serve as an index in judging of physiological and pathological variations.

Past observations, however, suffice to distinguish, to a certain degree, between the two extremes. Elsberg, in his experimental researches, devised a sort of estesiometer, based on Weber's principle. With this he conducted a series of observations with a view of establishing—1st, the normal and pathological tactile sensibility; 2nd, the sensibility to pain; and, 3rd, the reflex sensibility.

A case of hypoesthesia observed in the Polyclinic of Genoa afforded Masini a good opportunity to continue these researches. He modified Elsberg's estesiometer, basing his observations, however, on the same general divisions. His conclusions were as follows: greatest tactile sensibility in the inter-arytenoid portions, especially of the mucous membrane investing the cartilages of Santorini, whilst the vocal cords, both in their anterior and posterior sections, showed a marked reduction of sensibility. This was even lower in the epiglottis, whilst the sensibility of the ary-epiglottic ligaments seems to be midway between that of the vestibular and arytenoid portions of the larynx. Accepting the tactile sensibility of the mucous covering of the Santorini cartilages as standard and expressed in fractions, the relation would be as follows: Santorini cartilages, ten-tenths; vestibule of the larynx, eight-tenths; vocal cords and ary-epiglottic ligaments, five-tenths; epiglottis, one-tenth. Attempts to establish the degree of caloric sensibility were rather unsatisfactory, but the inter-arytenoid area appeared most sensitive to such influences. As regards sensibility to pain, results were quite similar, the inter-arytenoid and vestibular sections of the larynx being sensitive in comparison with ary-epiglottic ligaments, vocal cords, and epiglottis. The reflex sensibility which is principally involved in hypoesthesia presented varying phenomena, according to the part of the larynx examined. The vestibular and inter-arytenoid portions were most sensitive, even to the slightest irritation, whilst the vocal cords and the epiglottis presented the contrary state. Excluding their posterior attachments, reflex sensibility is quite reduced in the vocal cords, very much accentuated, however, in the subglottic region. The various functions of these structural parts will readily account for the differences in sensibility. The relations existing in the normal state are frequently altered, even inverted, in pathological conditions. The author demonstrates this in a clinical case of aggravated hypoesthesia, in which there existed great reduction of sensibility of the inter-arytenoid, the vestibular, and the subglottic parts of the larynx. That of the epiglottis was markedly heightened, as if to replace, compensatorily, the lack in the first mentioned areas. The main symptoms she complained of were those arising from disturbances of deglutition, and the entrance of food or liquid into the respiratory tract. Electric treatment, the application of the constant current, massage, and hydro-therapy seem to have been followed by some improvement. The author then calls attention to the etiology occurring both in hysteria and due to grave infections, as in cholera, diphtheria, typhus, small-pox, and erysipelas, and attempts to draw the lines of distinction between these and the subject in discussion. From a physiological standpoint the case presented is of some interest. The fact of

anæsthesia without any motor disturbances of the laryngeal muscles does not confirm Exner's experiments on animals, nor corroborate Ziemssen's clinical experiences. The author attributes this variation, however, to differentiations in the etiology of hypæsthesia.

Jefferson Bettman.

**Moncorgé** (Mont-Doré).—*On Three Cases of Laryngeal Ictus*. "Arch. Internat. Laryng., Otol., Rhin.," July-Aug., 1896.

CASE I. A man of forty-six, with nervous and catarrhal family history, but none of epilepsy. The patient highly neuropathic and impressionable, with a history of rheumatism, but none of syphilis, alcoholism, or malaria. Winter cough for some years. During the last two years, after influenza, subject to severe coughing fits. While taking a walk the patient became aware of a tickling sensation in the throat; this was followed by a very gentle cough, and consciousness was lost and a fall to the ground resulted. Consciousness was immediately regained, and the patient asked what had happened. It appears that during the previous eighteen months, on four or five occasions, a similar tickling and gentle cough had been followed by vertigo and sense of pressure at the temples, but not by loss of consciousness. Violent fits of cough had caused no vertigo. On examination, though carefully looked for, no signs of tabes were present, except absence of knee jerks. There was some albuminuria, and the arterial tension was slightly in excess. Upper air passages healthy. For a few days after the attack described the tickling and cough were followed by slight vertigo.

CASE II. A man of sixty, subject to winter cough from youth. Albuminuria, arterial hyper-tension, cardiac hypertrophy, emphysema, chronic pharyngo-laryngitis. On four occasions, the first at the age of fifteen, a tickling of the throat, accompanied by attacks of excessive coughing, was followed by loss of consciousness, without convulsions. After prolonged attacks of cough vertigo was frequently experienced.

CASE III. An attack witnessed by the author in a lady of forty-five, subject to sneezing, winter cough, and asthmatic attacks for two years. While under treatment with morphia injections for an attack of paroxysmal asthma, the author was able to observe the patient go into a series of short attacks of jerky cough, which appeared to leave her asphyxiated. The face became purple with congestion, but a pallor suddenly supervened, and consciousness was lost for thirty seconds, during which time the lips and fingers of the left hand moved convulsively. Careful examination revealed no disease of the kidneys, heart, or upper air passages.

The author proceeds to point out the essential differences in the pathogeny of these three cases. No classification can, however, be based on the pathogeny, which is as yet wholly obscure, the sole constant phenomenon being a reflex in which the superior laryngeal nerve is concerned. Classification by symptomatology, based on a congestive syncopal, convulsive, etc., character of the attacks, entirely fails to satisfy. Etiology alone presents some basis for classification. In the same manner that asthma may be divided into true nervous asthma and the pseudo-asthma dependent on Bright's disease, cardiac disease, etc., etc. (and he draws attention to the paradox that some pseudo- or symptomatic asthmas more closely resemble the typical nerve asthma than do some of the unusual forms of the latter), the author proposes the following classification of ictus :—

I. Essential laryngeal ictus (type, Charcot).

II. Pseudo-laryngeal ictus—

|                      |   |   |   |                       |
|----------------------|---|---|---|-----------------------|
| In nerve<br>disease. | { | Neuropathy<br>Hysteria<br>Tabes<br>Epilepsy | } | with laryngeal spasm. |
|----------------------|---|---|---|-----------------------|

|                                 |   |  |
|---------------------------------|---|--|
| Disease of the<br>air passages. | { Nasal<br>Laryngeal<br>Broncho-pulmonary | { (Polypi, etc.)<br>(Inflammatory and organic.)<br>Emphysema, whooping cough,<br>asthma, bronchitis. |
|                                 |   |  |
| Digestive<br>passages.          | { Bucco-pharyngeal.                       | { Albuminuria<br>Diabetes  |
| General dyscrasic<br>diseases   |   |  |

Ernest Waggett.

**Riehl** (Leipzig).—*Lymphendothelioma Cutis Multiplex*. "Wiener Klin. Woch.," 1896, No. 46.

IN a seventy-five-year-old patient affected with this disease, tumours were also observed on the velum, uvula, tonsils, and in the larynx. At the *post-mortem* examination tumours were found on the anterior surface of the posterior laryngeal wall between the cartilages. Two other tumours were embedded in the substance of the vocal bands. A round, hard tumour of the size of a bean was found in the left pharyngeal wall. An exhaustive description of the microscopical examination of the tumours shows that it is a lymphendothelioma of the skin and mucous membrane.

Michael.

**Scheier**.—*Photography of the Cavities of the Nasal Fossæ and of the Larynx by means of Röntgen Rays*. "Arch. Internat. Lar., Otol., et Rhin.," No. 6, IX.

THE author demonstrates the practicability of obtaining photographs, by means of the X rays, of all the accessory cavities of the nose, including the sphenoidal sinus. Foreign bodies in the nose can be detected by this method; and two cases of gunshot injury are here related, in which the bullets were located by means of photographs taken in two or more positions. Three excellent photographs of the larynx (from the cadaver) accompany the paper, and show, not only a pathological condition of the organ and a foreign body, but also the presence of abscess in a mass of cervical glands.

Ernest Waggett.

**Sendziak, J.** (Warsaw).—*An Unusual Case of Thrush of the Mouth, Naso-Pharynx, and Larynx*. "Archiv für Laryng. und Rhinol.," Band 4, Heft 3.

A GIRL, aged fifteen, complained of difficulty in swallowing, nasal speech, and occasional regurgitation of fluids through the nose. These symptoms had been present for two weeks. A month before, the patient had had a severe attack of diphtheria, which had left her very weak. On examination the author found considerable redness and swelling of the mucous membrane covering the entire soft palate, faucial pillars, and uvula. A number of white spots, varying in size from a pin's head to half a centimètre in diameter, were seen scattered over the surface. The larger patches were evidently due to the coalescence of two or more spots. These were especially abundant on the faucial tonsils, where they formed almost entire membranes, similar to those of diphtheria. The posterior pharyngeal wall was but slightly affected. The roof and lateral wall of the naso-pharynx also presented here and there small isolated white spots; the mucous membrane of this region was red and swollen. The posterior ends of the middle and inferior turbinates and the edge of the vomer were similarly affected. Spots, or rather membranes, were observed on the lingual tonsil, also on the anterior surface of the epiglottis, the ary-epiglottic folds, the posterior wall, and the pyriform sinuses; the underlying mucous membrane was red and swollen. The cervical glands on both sides were somewhat enlarged, but not painful. The appetite was poor.

The appearances suggested a mycosis. The patches could be easily and almost

bloodlessly removed, leaving the mucous membrane red and slightly irregular. On microscopic examination the deposits presented numerous epithelial cells and masses of fungus, which proved to be made up of branched cylindrical filaments, consisting of elongated superposed cells, with granules. The sporangia and individual spores were also visible. In short, the appearances were typical of the *oïdium albicans*.

Arsenic was given internally, and gargles of menthol. The general condition began to improve. The regurgitation through the nose and the pain on swallowing ceased. The number of deposits and the redness and swelling of the mucous membrane diminished. After two weeks there were traces of the disease only on the faucial and lingual tonsils, and at the end of two months these had completely disappeared.

The author refers to a few somewhat similar cases that have been recorded.

*A. B. Kelly.*

**Shield, A. M.**—*A Case of Fractured Larynx. Tracheotomy; Thyrotomy; Recovery.* "Lancet," Nov. 14, 1896.

FRACTURE of the larynx is a rare accident and a dangerous one. Durham, in his well-known article in "Holmes's System of Surgery," collected sixty-nine cases, and no less than fifty-three ended fatally. In this case a woman, aged twenty-three, while walking in her sleep, stumbled and fell, striking her throat against the top rail of a chair. On admission to the hospital there was considerable dyspnœa, but very slight cyanosis. There was great swelling of the neck about the region of the thyroid gland, and, on examination, distinct surgical emphysema could be detected. No crepitus could be made out, owing, no doubt, to the swelling about the parts. The patient could only speak in a hoarse whisper; but any attempt at speaking aggravated the dyspnœa and brought on a copious expectoration of blood and mucus.

The night after admission to the hospital, in consequence of an attack of sudden dyspnœa, tracheotomy was performed. Nineteen days afterwards she left the hospital, apparently perfectly well; but three days later she was brought back, suffering from urgent dyspnœa, cyanosed, and evidently in a worse condition than she was in on her first admission. Tracheotomy was required at once. The patient was relieved; and laryngoscopic examination showed stenosis of the larynx and subglottic obstruction. Laryngo-fissure was, therefore, performed; and a tough cicatricial web was found, stretching across the larynx, below the level of the vocal cords. This tough cicatricial mass in the larynx was very peculiar; and the explanation of its formation could only be that the mucous membrane below the vocal cords was extensively rent, and the plastic exudation and subsequent cicatrization excessive. The tissue was so tough that no efforts at intubation or stretching from above could have been of any permanent avail. No displaced cartilage could be felt, and the exact site of the fracture remains uncertain, except that it was below the vocal cords.

A patient suffering from fracture of these parts is in momentary danger of suffocation from displacement of the fragments or from œdematous swelling; and it is probably wiser to perform tracheotomy in such cases whenever dyspnœa becomes urgent.

*StClair Thomson.*

## THYROID.

**Baumann and Goldmann** (Freiburg, Baden).—*Is Thyro-Iodine the Active Ingredient of the Thyroid Gland?* "Münchener Med. Woch.," 1896, No. 47.

THIS paper was sent by Baumann, a few days before his death, to the "Münchener Med. Woch." The author's investigations are summarized in the following results:—In dogs whose thyroid glands are extirpated tetanic symptoms do not appear if they receive thyro-iodine daily (three to six gm.). If this is diminished tetanic symptoms appear. To cure tetany in thyroidless dogs thyro-iodine is necessary in direct relation to strength of the attacks. The organism of the thyroidless dogs is not capable of retaining the thyro-iodine, this substance always appearing *in toto* in the urine. *Michael.*

**Edmunds, W.**—*Further Observations and Experiments on the Pathology of Graves' Disease.* "Brit. Med. Journ.," May 30, 1896.

THE author read a paper at the Pathological Society of London, in which he pointed out that the reservation of a single parathyroid was sufficient to prevent symptoms of athyroidea. If both parathyroids were removed a considerable amount of the thyroid must be reserved to prevent these symptoms. In a single parathyroid left, hypertrophy took place, secreting cells multiplying. Even after six months only a few minute collections of colloid were to be found.

When a portion only of the thyroid gland was left, the vesicles enlarged and ridges projected into the interior, the cells becoming columnar. The colloid was mostly replaced by a deeply staining material.

Similar changes took place in Graves' disease. Excision of the parathyroids in rabbits caused the opposite condition to exophthalmos. In dogs a widening of the palpebral orifice was occasionally seen after partial excision of the thyroid.

*Ernest Waggett.*

**Horsley.**—*The Physiology and Pathology of the Thyroid Gland.* "Brit. Med. Journ.," Dec. 5, 1896.

THE author commences with a short *résumé* of the history of his subject, from the time that King, nearly one hundred years ago, demonstrated that the thyroid was a secreting gland, up to 1884, when Semon pointed out that some of the symptoms following extirpation of the organ were analogous to myxœdema. It was not, however, until the author obtained a chronic experimental strumipriva, by the employment of herbivorous instead of carnivorous animals, that this identity was firmly established. *Post-mortem* examination of monkeys, dead from induced myxœdema, proved that no surgical disturbance of the sympathetic or other nerves in the neck could be held responsible for the athyroideal state. Further, the *coup de grace* has been given to the sympathetic theory by Murray's discovery of the relief of the symptoms of myxœdema by the internal administration of that structure the loss of which coincided with the incidence of the disease.

Since 1891 the anatomy of the gland, and particularly of the parathyroid, has been the subject of much investigation. Prenant has demonstrated that in the sheep the parathyroid develops in chronological advance of the main gland, as an outgrowth of the thyroid vesicular prolongation. Its minute structure is similar to that of the adrenal cortex, being composed of columns of endodermal epithelium cells, separated by capillaries; and though no true acini or colloid secretion are to be found, there is evidence of the secretory character of the organ. The anatomical characters of the normal and of the hypertrophied parathyroid lend support to the theory, arrived at on physiological grounds by Gley, that the organ is a gland *sui generis*, and has a specific function.

Inasmuch as the thyroid has been proved a secreting gland, the epithelium is of primary importance for investigation. The cubical cells appear to be of two distinct kinds, one of which has characters suggesting the formation of the colloid material within the cell.

In compensatory hypertrophy, the cubical cells become elongated and columnar; the outline of the acini becomes irregular instead of spherical, until the appearance of a conglomeration of tubules replaces that of cystic spaces, and in some instances the lumen is actually obliterated (micro-photographs).

Finally, the colloidal contents are replaced by a watery fluid, with some granular *débris*. In parenchymatous enlargement of the gland, much the same appearances are seen, but the most remarkable similarity is to be observed in exophthalmic goitre, where a similar metamorphosis of the acini and their contents accompanies the general enlargement of the gland. With regard to the last-named disease, it is to be noted that the tremor of all thyroïdal lesions is the same as that of acute cachexia strumipriva. The question of chief moment is, whether the anatomical changes have a causal influence, or whether they are merely secondary to central nerve lesions. Hitherto the nerve supply has not been proved (by excitation) to exert a secretory influence [comparable to that in the salivary glands. The question has therefore been approached from a clinical standpoint, and there is a tendency to look upon a perversion of secretion as a cause of the symptoms. The author points out that, with an extensive perversion of secretion, there must be a certain degree of athyroidism.

Turning to the secretory epithelium, evidences of increased activity are seen after administration of pilocarpin. Speaking of the appearance of vacuoles, due doubtless to the secretion of watery droplets, the author digresses to mention that the vacuolation of the nuclei of fat cells, a fairly constant phenomenon in myxœdema, has been shown by Sack to be present in normal developing fat, and in senile degeneracy and other conditions.

In conclusion, a comparison between the polygonal cells occupying the lumen of the shrunken acini in myxœdema, and those of the compensating active transplanted thyroid in one of Von Eiselberg's experiments, leads us yet to look for an estimate of the athyroidal condition rather in the changes in the epithelium itself than in the products of its secretory activity.

To summarize: it is generally agreed that, whereas myxœdema and cretinism result from simple loss of the function of the thyroid gland, exophthalmic goitre in its various degrees results from a perversion of that function. *Ernest Waggett.*

**Owen, D.**—*Thymus Feeding in Exophthalmic Goitre.* "Brit. Med. Journ.," Oct. 10, 1896.

A REPORT of three successful cases together with a collection of recorded examples. The large size of the thymus in infancy and during hybernation would seem to indicate some relation between the activity of this gland and the cerebral and sexual functions precisely antagonistic to that of the thyroid gland. *Ernest Waggett.*

**Rolleston, H. D.**—*Tuberculosis of the Thyroid with Abscess opening into the Œsophagus.* Path. Soc., "Brit. Med. Journ.," Nov. 7, 1896.

TUBERCULOSIS, a very rare condition of the thyroid, was in this instance secondary to tubercular caries of the spine in a woman of twenty-three. Mr. BERRY had seen but one instance of miliary tuberculosis of this gland. *Ernest Waggett.*

**Roos** (Freiburg, Baden).—*On the Number of Active Substances in the Thyroid Gland.* "Münchener Med. Woch.," 1896, No. 47.

OF the thyroid gland, Fränkel has extracted a substance which he has called "thyro-antitoxin," which he believes to be an active substance of the gland as well as thyro-iodine. The experiments of the author with this substance prove

that thyro-antitoxin has no effect at all, and that the only efficient substance is Baumann's thyro-iodine. *Michael.*

**Swoboda** (Wien).—*Teratoma Colli Strumam Cysticam Simulans*. "Wiener Klin. Woch.," 1896, No. 46.

IN a twelve-weeks-old child the author removed a tumour situated on the right side of the neck, compressing the trachea, and apparently a congenital struma. The child was cured. The examination of the tumour showed that it was not a struma, but a teratoma, containing glia cells, ganglion cells, and fibrillar connective tissue. *Michael.*

**Todd, C.**—*A Case of Exophthalmic Goitre treated with Thymus Gland*. "Brit. Med. Journ.," July 25, 1896.

THE case, which had resisted prolonged and energetic treatment with drugs, was rapidly relieved of distressing symptoms. The pulse, irregular and 156 to the minute, was in three days (taking 30 grains of dried gland) reduced to 130, and after three weeks (with increasing doses) was 72, and regular. At the time of report the exophthalmos and goitre remained unchanged. Irregularity of pulse followed a short cessation of the treatment. *Ernest Waggett.*

**Woodman, J.**—*Myxœdema: a Case treated by Thyroid Extract*. "Med. Record," Oct. 31, 1896.

MRS. F., thirty-eight; six children, the last of which was born in 1893; family history good; previous history good; had been constipated all her life. Present illness began eight years ago, with slight swelling of left side of face and left eyelid, then of right side of face and right eyelid. Gradually the whole body was involved. Weight increased from one hundred and twenty to two hundred and forty pounds. Sweating ceased entirely with the onset of the disease; the skin became hard and dry, and after an attack of jaundice deeply pigmented. The hair in axillæ and on pubes fell out, that on scalp became coarse, hard, and brittle. The usual mental symptoms were well marked, and patient saw rows of faces and thought someone always followed her about. The urine was somewhat scanty, and always contained albumen. Palpitations, dyspnoea, etc., were present. In short, the case was a very well marked one of myxœdema. The treatment by thyroid extract and large quantities of water was begun on January 4, 1895. Improvement was very rapid. By May 1st weight was reduced from two hundred and forty to one hundred and eighty pounds, and in all other respects patient had returned to her normal condition. The thyroid feeding is still kept up, and patient remains well.

During the eight years of her illness three children were born. During the pregnancies all the symptoms were exaggerated. The children were born healthy, and were breast fed. The first child is strong and well, the second died of erysipelas at four months, and the third had a convulsion at eighteen months, after which hemiplegia developed. *A. J. Hutchison.*

## ŒSOPHAGUS.

**Hamilton, T. K.** (Adelaide).—*Epithelioma of the Upper Third of the Œsophagus, and Œsophagotomy*. "Australasian Med. Gaz.," June 20, 1896.

A LADY, aged thirty-one, six months after an attack of influenza, began to have darting pains—independently of deglutition, and not increased by that act—extending from the region of the larynx up towards the left ear. Soon after

wards dysphagia set in, and gradually increased until swallowing solids became an impossibility.

When first seen by the author she could swallow only small quantities of liquids. Laryngoscopic examination revealed nothing, but with the finger a hard mass was found opposite the lower border of the cricoid cartilage, springing from the posterior and left side of the passage. A very small opening existed on the right side. A piece of the growth was removed, and proved to be epitheliomatous.

Œsophagotomy was performed. As the growth was fairly adherent to, and incorporated with, the walls of the œsophagus, no attempt was made at removal. The walls of the tube were then sutured to the skin, and a larger rubber tube inserted, which was subsequently replaced by a full-sized india-rubber tracheotomy tube. She is now fed entirely through the opening, and is improving greatly in health.

A. B. Kelly.

**Johnston and Holland.**—*Two Cases of a Halfpenny in the Œsophagus. Diagnosis by X Rays.* "Brit. Med. Journ.," Dec. 5, 1896.

OF one of these cases an excellent photograph was obtained, which is reproduced. The patients in either instance were two and a half years of age; and no difficulty was experienced in making out the position of the coin with the aid of a fluorescent screen.

Ernest Waggett.

**Raw.**—*Foreign Body in the Œsophagus. Localization by X Rays.* "Brit. Med. Journ.," Dec. 5, 1896.

A REMARKABLY clear photograph was obtained (reproduced), showing the coin lying opposite the fourth, fifth, and sixth cervical vertebræ. The patient, a restless child of two years, was allowed to fall asleep; and the sensitive plate was then slipped under the pillow on which the head rested. The focus tube was fixed nine inches above the head.

Ernest Waggett.

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## E A R.

**Bezold, F.** (Munich).—*Demonstration of a Continuous Range of Tones for the Detection of Defects of Hearing, especially in Deaf Mutes, and its Significance in support of Helmholtz's Theory.* "Zeitschrift für Psychologie und Physiologie der Sinnesorgane," Band 13.

PROF. BEZOLD'S apparatus for the production of pure tones through all the range of audition consists, in the first place, of ten tuning-forks, from B<sub>3</sub> (fifteen vibrations) up to c<sup>3</sup> (one thousand and twenty-four vibrations). This covers the lower half of the scale of audition and they are fitted with movable weights, so that the intermediate notes between each pair of tuning-forks can be produced. For physiological examination, a fork with a tone as low as eleven vibrations is further called into use. He finds that the curve of vibrations obtained from the stem of the tuning-forks is the same as that from the blades, and not, as is sometimes supposed, an octave higher. The upper half of the range—viz., from c<sup>2</sup> upwards—is tested by means of three stopped pipes, with a movable piston, the highest one being the well-known Galton's whistle.

The lower limit of audition in the human ear seems to be eleven vibrations, or even somewhat lower; the upper one about fifty-five thousand; the whole range extending somewhat over twelve octaves.

For the appreciation of this continuous range of tone, Prof. Bezold finds it

necessary that there should be, at the peripheral termination of the acoustic nerve, some mechanical auxiliary apparatus which should possess the property of chromatic stringed instruments, and have an element in it corresponding to each individual tone of the whole scale with which it may enter into sympathetic vibration, and which would communicate a stimulus to the nerve fibre connected with it. He urges our indebtedness to Helmholtz for having demonstrated the necessity for such an apparatus and the probability of its being represented by the cochlea. The best adapted arrangement for this sympathetic vibration is the membrana basilaris of that organ.

He holds, further, that this theory receives support from the results of full functional examination of the human ear, especially in regard to loss of hearing for different tones in the range. Assuming that partial losses of hearing are observed, the question arises as to whether corresponding areas of disease in the course of the lamina spiralis are shown by pathological dissection after death. He holds that experiments made upon animals lead to serious errors, and that in the human subject the loss of the cochlea leads, without exception, to complete deafness in the affected ear. He adds that there have been recorded a number of dissections where the localization of the disease in the cochlea has corresponded with the partial loss of hearing, and to disprove Helmholtz's theory it would be necessary to bring forward a case of destruction of the cochlea in which, during life, a corresponding defect of hearing had been proved not to exist. Such a case has not yet been brought forward. One great difficulty connected with investigation is the impossibility of excluding the hearing of the opposite ear, unless it is at the same time highly defective—even deaf—and this in spite of the greatest care in occluding it. Bezold then comes to the conclusion that we can only test reliably the hearing for the lower half of the tone range in any case of unilateral deafness, as no amount of occlusion will prevent the sound ear from hearing the higher notes of the scale. It is found, after necrosis of the labyrinth, that there is complete deafness for the notes of this lower half.

Given a defect of hearing for a portion of the scale, its cause may arise from changes situated peripherally or centrally to the labyrinth. Disease of the middle ear leads to loss of hearing for the lowest portions of the scale. The same, according to Helmholtz's theory, would arise in the case of disease affecting the uppermost turns of the cochlea. This is, however, to be distinguished from the former condition by the results of the tests for bone conduction. As regards the detection of changes in the auditory nerve on the central side of the labyrinth and its paths of junction with the cerebral cortex, the difficulties are very great, and in most cases it can only be founded upon the detection of simultaneous implication of neighbouring nerve structures. Prof. Bezold is very doubtful whether defects in the cortical centre can give rise to gaps in the range of hearing, as this centre is educated to receive the auditory impression, however complex, as a whole, and not as made up of numerous elements in the tone range; hence a gap in the hearing would indicate that the diseased condition was situated somewhere else, rather than in the cerebral auditory centre. Further, there is little doubt that each ear is connected with both cerebral hemispheres, and therefore, for a gap in the hearing to result from disease of the auditory cortical centre, this disease would not merely require to be bilateral, but further to affect identically symmetrical spots in the cortex of the two sides.

The examination of deaf mutes frequently reveals gaps in the range of audition, there remaining very frequently larger or smaller residua of hearing power, while *post-mortem* examinations show, in the majority of such cases, changes in the labyrinth. The functional examination of such patients is free from the fallacies arising from the difficulty of occluding the sound ear. Prof. Bezold therefore

investigated seventy-nine deaf mutes (that is, one hundred and seventy-eight ears). Of these, forty-eight ears were totally deaf, and one patient was unsuitable for thorough examination. The remaining ones had residua of hearing, and could be classified in the following groups :—

1. Those presenting only an "island" of hearing power, in which the hearing at the upper and lower extremities of the range was lost, leaving an intermediate field of audition extending over not more than two and a-half octaves, and in the worst case including only two semi-tones.
2. Those presenting "holes" or gaps ; single in sixteen, double in four.
3. Those presenting loss of hearing for the upper part of the tone range.
4. Those with defects of varying extent, simultaneously at the upper and at the lower extremities of the range.
5. Those with extensive defects confined to the lower tones.
6. Thirty-three ears in which there were only very slight defects at the upper and lower extremities of the range.

From the variety of the deficiencies exhibited in the first five groups, Prof. Bezold concludes that normal perception for the different parts of the tone-range is localized in an area of considerable extent, a view which he considers to be a strong element in favour of Helmholtz's hypothesis. The results of the functional tests in the sixth group would exclude in them any considerable degree of destruction of the labyrinth, or the trunk of the auditory nerve, and the deaf-mutism must in this set of cases be ascribed to changes in the cerebrum itself. The picture of the field of audition in deafness due to cerebral disease would therefore be the one found in the sixth group, namely, slight defects at the two extremities of the scale ; whereas partial lesions of the cochlea, and in rare cases, perhaps, of the acoustic nerve trunk, would be indicated by fields of audition showing islands or gaps, as in the first and second groups, and the diminished ranges present in the third, fourth, and fifth groups.

*Dundas Grant.*

**Broca, A.**—*Abcès du Cou consécutifs aux Otites Moyennes Suppurées.* "Arch. Intern. de Lar., Otol., et Rhin.," Nov. and Dec., 1896.

THIS paper was elicited by that of Hamon du Fougeray on the same subject, and in particular by what that author states with regard to those cases which fall under the heading of "abscess in direct continuity with a focus of osteitis." He would seem to imply that as many as thirty per cent. of acute mastoid cases came into this category. Broca, on the contrary, considers the condition associated with the name of Bezold to be in reality one of great rarity. Out of two hundred mastoid cases, only once has he met with the complication. On the other hand he has met with cases, at first sight examples of mastoiditis of Bezold, which, however, proved to be dependent on disease of portions of the petrous bone other than the mastoid process. He has, therefore, formulated the rule that where a neck abscess is present, that should be opened and explored before the mastoid cells are interfered with. Every case in which pressure on the cervical swelling causes pus to flow from the ear is not a mastoiditis of Bezold, and what is said in this connection upon suppuration due to infection of the jugular vein, and upon glandular suppuration due to disease of the middle ear or of the meatus, is well worth reading in the original.

*Ernest Waggett.*

## REVIEWS.

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**Ephraim** (Breslau).—*Die Nervösen Erkrankungen des Rachens*. ("The Neuroses of the Pharynx.") "Volkmann's Vorträge Neue Folge," No. 162, pp. 51. Leipzig: Breitkopf and Hartel. 1896.

THE author gives a very clear and critical review on the nervous diseases of the pharynx, beginning with the anomalies of sensation, which he divides into spontaneous sensations arising without external irritation, and abnormal sensibility or hyperæsthesia. By careful examination he confirmed Schadowaldt's observations on localization of pharyngeal irritation to the anterior laryngeal region. During swallowing and singing sometimes sensations are felt by healthy persons. Sensations referred to the immobile pharynx are always pathological. Such sensations are caused by psychical alteration, hysteria, hypochondria, or by peripheral causes, as abnormal secretions, tumours, and foreign bodies. The sensations are described as constriction, cold, globus hystericus, burning, pressing, tickling, etc., pain and feeling of foreign body. Irritation in the normal pharynx causes choking and contraction. In cases of hyperæsthesia these reflexes are increased; in cases of anæsthesia they are diminished or absent. The existence of a nervous anomaly only can be diagnosed if an exact examination of the pharynx and nose shows no pathological symptoms. The neuroses of motility are paralyses and spasms. Paralyses of the velum produce abnormal speech; paralyses of the constrictors pharyngis cause the food to enter the larynx instead of the pharynx. In many cases, especially of diphtheritic paralyses, these are combined. Such paralyses can be produced by bulbar paralyses and other diseases of the brain. Peripheral facial paralysis is often combined with paralysis of the uvula. Clonic spasm of the pharynx is rare; toxic spasm is observed fairly often. They are caused by irritations, as depression of the tongue and laryngoscopy, and by central causes, as neurasthenia, hysteria, and tabes. As vaso-motoric neuroses, hyper-secretion, angio-neurotic œdema, and urticaria of the pharynx must be mentioned. A case of tropho-neurotic ulcer is described by Westbrook. Reflex neuroses, increase of the normal irritation, are caused by hysteria, and by pharyngitis, etc. Reflex neuroses are headache, pains in the ears, skin, larynx; motoric reflex neuroses are torticollis, breezing spasm, blepharo spasms, asthma, cough, vomiting, glottic spasm, and choking. *Michael.*

**Moure**.—*Le Coryza Atrophique et Hypertrophique*. Par E. J. MOURE, Chargé de Cours à la Faculté de Médecine de Bordeaux. ("Atrophic and Hypertrophic Coryza." By E. J. MOURE, Lecturer in the Faculty of Medicine at Bordeaux.) With 8 Figures in the Text. Paris: Rueff et Cie., Publishers. 1897. "Bibliothèque Médicale, Charcot-Debone."

DR. MOURE has offered us in the above work the result of his studies connected with the two most frequent clinical forms of nasal disease. Out of the hundred and eighty-four pages, one hundred and twenty-

nine are devoted to atrophic, and the remaining fifty-five to hypertrophic coryza, a proportional distribution which our readers will readily understand and appreciate. The writer draws a distinction between the fœtid form of atrophic coryza and the non-fœtid, but he confines himself almost entirely to the former. A full account is given of the various theories with regard to these diseases, and Dr. Moure shows himself to be possessed of a catholic frame of mind towards them all. He favours the idea that there is an antecedent hypertrophic condition in ozœna, although more of the nature of a tumefaction than of a genuine hypertrophy, but that this is not absolutely necessary and that in many cases the atrophic condition is the primary one.

He rejects the idea that ozœna is always to be attributed to suppuration in the accessory cavities, although the disease often extends to them, and requires them to be treated in order that a cure may be brought about. In a large number of cases the cells affected are the posterior ethmoidal and the sphenoidal. The causal relation of post-nasal adenoids to ozœna, suggested by Couétoux, is considered exceptional. He supports Loewenberg's revised opinion with regard to the microbic element, and allows that the unusual capacity of the nasal cavities to which Zaufal attributes so much importance is also an element favouring the production of ozœna.

Dr. Moure's prognosis is more favourable than that of most authors. He urges the possibility even of a spontaneous cure. In any case he promises absolute and rapid relief from the objectionable symptoms, and in many cases even a cure of the condition, if treatment is carried out with perseverance. Naturally this involves accurate diagnosis, which he deals with in, perhaps, a somewhat condensed section.

In the treatment, he naturally insists on the necessity for copious nasal douches, anterior and posterior, and he gives some useful formulæ. He follows these up by the use of oily antiseptic sprays, and he rejects the use of powders altogether. To shorten the course of treatment, he recommends nasal sprays of nitrate of silver and vibratory massage or galvanisation. He then often finds it justifiable to diminish the frequency of the douches and ultimately to leave them off, the patient simply requiring to snuff up a little salt water from time to time to help him to clear his nose. Naturally, if the accessory cavities are implicated, they call for appropriate surgical treatment. Many aspects of the question, and especially among others the relation of sex and sexual changes, are discussed in this interesting monograph.

In defining hypertrophic coryza, Dr. Moure specially excludes the simple tumefaction of the erectile tissue, which is characteristic of very many cases of chronic simple rhinitis, and only admits those forms in which there is an increase in number and in volume of constituent elements of the pituitary membrane. Its frequency is equal in the two sexes, but the influence of age is very marked, and hypertrophic coryza is practically unknown in old age, unless, indeed, under the form of mucous polypus.

He discusses the various causes, attaching more importance among the climatic influences to dampness than to either heat or cold; while as regards local causes, he attributes considerable importance to

the effect of irritants, such as tobacco smoke, snuff, nasal obstructions, especially deviations and outgrowths of the nasal septum, collapse of the alæ of the nose, and adenoid vegetations. The inspiration of cold liquids is also cited. Among other nineteenth century causes he mentions the chronic nasal catarrh brought about by the inhalation of dusty atmosphere during cycling. The description of the symptoms is interesting and in accord with general experience. On the whole the prognosis is favourable, although the mischief resulting from the long persistence of nasal obstruction in neglected cases is often irremediable.

In regard to treatment in the early stage, the author is in favour of the use of nasal douches, followed by sprays of boric acid or certain astringent substances, such as tannin, alum, or particularly the acetotartrate of aluminium, which he greatly prefers to the insufflation of powders. He is in favour of the use of oily solutions of menthol and iodoform, and also of ointments containing small proportions of cocaine with menthol and boric acid.

For use with the nasal douche, whether for atrophic or hypertrophic catarrh, Dr. Moure has devised a curved nasal canula, by which the patient can direct the stream along the floor of the nose, instead of upwards into the olfactory region, where it is apt to be injurious. We confess a little hesitation in recommending the nasal douche in the hypertrophic form of rhinitis as a matter of routine, but with the rest of Dr. Moure's treatment we cannot but agree most absolutely. Thus he gives an admirable description of the employment of the galvano-cautery, of the cold snare, of the galvano-caustic snare, and of the method of employing electrolysis.

The exposition of the thoroughly matured views of a careful and accurate observer upon the common and often obstinate affections which are treated of in this beautifully got-up work, will be found a great source of interest and of comfort to those who are called upon to deal with them, and we cordially recommend a study of Dr. Moure's methods to all our readers.

*Dundas Grant.*

**Reid, StGeorge.**—*Bacteriological Diagnosis.* 64 pages. (London: Ballière, Tyndall, & Cox, King William Street, Strand.)

THIS book consists of a series of most carefully worked-out tables of the behaviour in various media of the present known micro-organisms which play now so important a rôle in pathology. Its use is essentially for the laboratory, and will prove of great value to workers in this field, which we will demonstrate by an example. An organism liquefies gelatine; on page 5 we have all the cocci which do this; on page 7, all the bacilli which act similarly. Having now by means of the microscope decided it is a coccus, we look on the first of the two pages quoted, and note the varieties which produce the colour of the growth we seek to identify—let us say, yellow, and that rapid liquefaction is also present; then, if it is in masses it is one of seven, and full particulars of these are to be found on page 14. This example shows how, by means of this useful and handy volume, we can save hours of labour, and is one which should not

only find a first place in laboratories, but also on the shelves of every amateur, and we cordially recommend it to our readers.

**Browne.**—*Diphtheria and its Associates.* By LENNOX BROWNE, F.R.C.S. Ed. (London : Ballière, Tindall, and Cox, 1897.)

THE second edition of this work has already been called for, and Mr. Browne is to be congratulated upon the success of the first ; and, also, the very favourable reception his work has received from so many different quarters. Naturally, on account of the short space of time which has elapsed, no great change is made beyond some improvements in the coloured plates. Mr. Browne's position with regard to the antitoxin treatment of diphtheria is known, and it may be here stated that in the preface he holds to his former views. His claim to give an impartial view of the present position of the question of treatment of diphtheritic patients by antitoxin is again forcibly put forward, and practitioners desirous of obtaining information on this point will find much to interest them in the work. Even those who may not be inclined to agree with some of Mr. Browne's views on the question or interpretation of facts will admit the value of the information which is placed at their disposal. The work, however, has been so well received that little is left for the reviewer but to compliment Mr. Browne on the success of his work.

*Macintyre.*

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## NEW NURSES' ASSURANCE SCHEME.

THIS latest addition to the prospectus of the Pearl Life Assurance Company, Limited (now commanding an annual premium income of considerably over half a million sterling), is a scheme for temporary assurance and pension especially applicable to *nurses*.

The advantages secured are unique, and the tables of rates show what can be done by a well-established assurance company transacting a large business with the middle classes. From a report of the directors it is shown that, during the year 1896 alone, 672,201 new policies were issued by the Company, and one hundred thousand pounds added to the policyholders' security fund, so that this important scheme can be commended to the favourable consideration of those whom it concerns.

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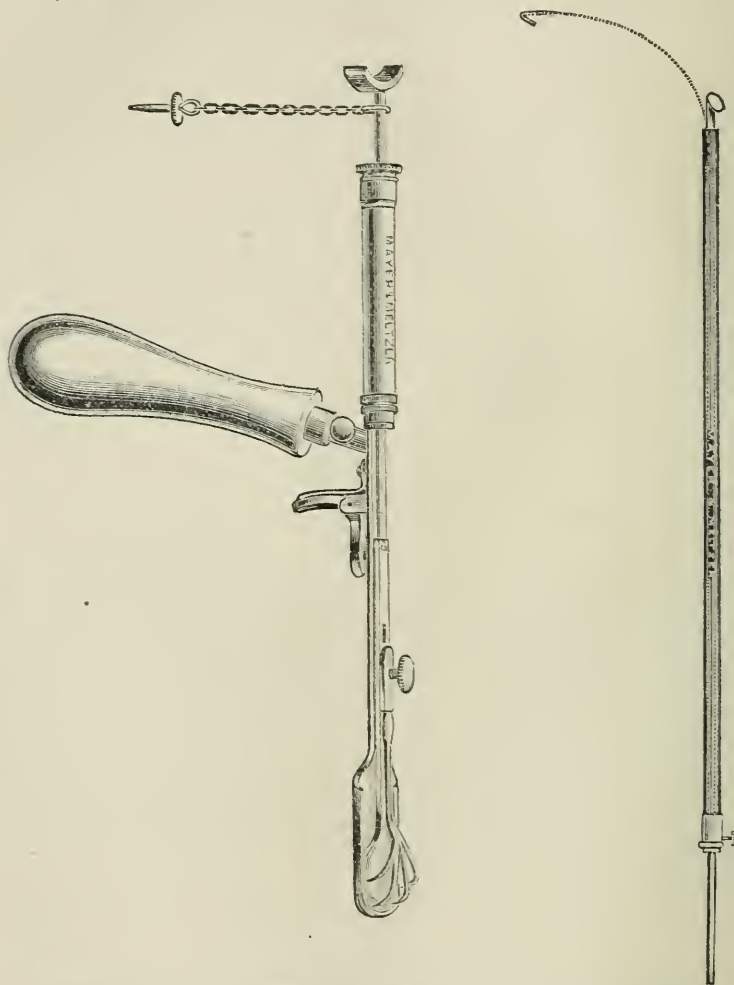
## NEW INSTRUMENTS.

### TONSILLOTOME.

The illustration represents a tonsillotome devised by Dr. Frederick Spicer.

This invention makes it no longer a necessity for an assistant to push the tonsils inwards and upwards from without. Before use the blade is drawn back until retained by the catch, and the small pin inserted into the hole in the shaft. The instrument is introduced into the mouth horizontally until nearly in position, and then turned sideways over the tonsil while the operator pushes it up with the thumb of the other hand. During this lateral movement of the instrument the

pins falls out, and on pulling the trigger the blade is projected by a spring and the tonsil is removed, instantaneously, painlessly, and with great precision. A specially devised guard is added to prevent the tonsil falling down the patient's throat. The instrument is made by Messrs. Meyer & Meltzer, 71, Great Portland Street, London.



NEW COIN-CATCHER (Messrs. Meyer & Meltzer, 71, Great Portland Street, London).

The instrument figured on the right-hand side is an improvement on the well-known form. It consists of an outer tube and an inner flexible bar with the catcher attached; this permits of easy rotation and manipulation, and was devised by Mr. A. Bowlby.

# THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

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## CONTRIBUTION TO THE TREATMENT OF DEAF-MUTISM BY OPERATION ON THE SO-CALLED ADENOID VEGETATIONS.

By Dr. JOHN SENDZIAK (Warsaw).

GREAT attention has lately been directed to the relation between deaf-mutism and the so-called adenoid vegetations. Various authors, working in different countries, upon careful investigations, came to exactly the same conclusions, namely, that in the deaf and dumb we much more frequently meet with adenoid vegetations than in healthy children. For instance, Lemcke<sup>1</sup> reports 58 per cent., Wroblewski<sup>2</sup> (Poland) 57·5 per cent. ; Peisson,<sup>3</sup> also, in over half of the deaf and dumb, found post-nasal growths. Further, Frankenberger,<sup>4</sup> 59·49 per cent. Finally, Aldrich (cited by the last author) gives a still greater percentage, namely, 73 per cent.

It will be seen that adenoid vegetations occur in the deaf and dumb very frequently. This fact is still more striking if we draw attention to the relatively very small percentage of these disorders, as is proved by analogous investigations, in healthy children. Such investigations are not wanting. Already Meyer (discoverer of adenoid vegetations) states that they hardly happen in 1 per cent. A little larger percentage gives Doyer (cited by Frankenberger), namely, 5 per cent. ; Schmiegelow, 5 per cent. of greater and 13 per cent. of less degree ; Wroblewski, 7 per cent. ; lastly, Kafemann, 9 per cent.

What an enormous difference in these figures ! Is it possible, in sight of this, to suppose a simple coincidence ? In my opinion it is not.

<sup>1</sup> "Die Taubstummheit im Grossherzogthum Mecklenburg Schwerin ihre Ursache und ihre Verhütung." Leipzig, 1892.

<sup>2</sup> "Pszeglast Lekarski," 1891, Nos. 23, 24.

<sup>3</sup> "These de Paris," 1883.

<sup>4</sup> "Adenoide Vegetationen bei Taubstummen nebst einigen Bemerkungen ueber die Actiologie der Taubstummheit." "Monatschrift für Ohrenheilk.," 1896, No. 10.

From the theoretical point of view it is probable that children that are born with adenoid vegetations (and there is no doubt about this occurrence, considering the cases known in literature, as, for instance, those of Thost, E. Fraenkel, Jaworski (Poland)—this latter case was a child nine months old; I, myself, also recollect some cases of this kind, *i.e.*, post-nasal growths in the newborn), or that get them in the first years of their lives, are frequently deaf from this cause, and are not able to learn to speak, or forget what they did know.

The cause of deafness is the mechanical obstruction of the Eustachian tube, or inflammatory process in the middle ear. That this is the case is also proved by statistics. For instance, Halbeis<sup>1</sup> gives 53 per cent.; Meyer and Hartmann a still larger percentage of post-nasal growths with the deaf, namely, 74·8 per cent., 74·18 per cent.

This theoretical speculation, which *à priori* presents itself so plausibly, finds its confirmation in practice—namely, there exist in literature cases, although they are rare, of deaf mutes cured by extirpation of adenoid vegetations. Here are to be mentioned, before all, two cases of Arslan and one of Couétoux (cited by Helme<sup>2</sup>). I also had occasion lately to observe, as well as to treat with a very good result, one such case.

G., five years old, a boy, was sent to me by one of my colleagues on account of congenital deaf-mutism. On close interrogation of the child's mother, I learnt that her twenty-year-old son was also deaf and dumb from birth. A daughter was also deaf and dumb, and died when four years old. The other two daughters are living, and speak and hear well. The eldest son was born with atresia ani, and died without being operated on. On examination I convinced myself that the child could neither hear nor speak.

Instead of speech there was a kind of stuttering, which it was quite impossible to understand.

The boy was physically fairly well developed. In the naso-pharyngeal cavity I found, by palpation, enormous quantities of adenoid vegetations; in the ears, retraction of the tympanic membranes. The internal organs did not present any abnormalities. Naturally, without promising the parents an absolutely favourable result, I proposed an operation, the more so as the child snored, and had the mouth always open, which caused frequent colds. Besides, he had a kind of aprosexia, *i.e.*, inability to concentrate the attention.

With the assistance of Dr. E. Zielinski, who administered chloroform (half narcosis, as I usually employ in such cases), I operated by means of Jurasz forceps and Gottstein curettes, as well as by finger wrapped round with iodoform gauze, soaked in 1 in 1000 sublimate solution (in order to remove the rest of the growth antiseptically, not being in favour of irrigation after the operation on account of danger to the ear).

The post-operative course, as usual in my cases, was favourable—no complications at all. In a week the wound healed.

After three months the boy was brought to me, and the mother told

<sup>1</sup> "Die Adenoide Vegetationen des Nasenrachenraumes," 1892.

<sup>2</sup> "Traitement des Végétations Adénoïdes." "Bull. et Mém. de la Soc. Franç. d'Otol., de Lar., et de Rhin.," 1896, XII., p. 50.

me with great joy that immediately after operation the hearing improved, and the child began to pronounce at first single words, later whole sentences, more or less distinctly.

Half a year after I had again occasion to see the patient. According to the mother, steady improvement in speech continued. The boy, as the mother emphasized, developed intellectually in a marked degree. Also his physical development improved greatly.

In another analogous case of a deaf-mute boy four years old, from whom I also entirely extracted the adenoid vegetations under chloroform, the result immediately after operation was also favourable. The hearing improved, and the child began to speak some words. Unluckily I am wanting further news of this case.

I am far from affirming from these observations that in every case deaf mutes may be cured by operative measures. I am, however, of opinion that whenever we find adenoid vegetations in deaf mutes, especially in large quantities, it is before all necessary to remove them.

If the result be only slightly satisfactory, it does not exclude the use of other methods of treatment (*i.e.*, teaching of speech), which in these cases may be much easier.

I suppose also that by early operation on adenoid vegetations (age and weakness of the child do not prove any contra-indication to this operation, which many authors, as I, for instance, apply in even very young infants) the development of the deaf-mutism may be avoided.

In my opinion this prophylactic signification of this operation is of great importance, and this question is worth while to carefully study.

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## SOCIETIES' MEETINGS.

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### THE LARYNGOLOGICAL SOCIETY OF LONDON.

*February 10th, 1897.*

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HENRY T. BUTLIN, F.R.C.S., *President.*

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*Case of Cleft Palate with Hypertrophy of the Posterior Extremities of the Inferior Turbinates and Adenoids.* Shown by Dr. EDWARD LAW.

Patient, a boy, aged sixteen, complains of difficulty in breathing through the nose, slight deafness, defective mode of speaking, and formerly the passage of liquids through the nose. Patient was operated upon when ten months old, but the result was not successful. A second operation was performed eight years later with great advantage, but the fissure appeared again during an attack of influenza two years ago, and seems to be still increasing.

On examination, a cicatrix is seen in the middle line of the hard palate, which terminates in a fissure passing through the soft palate. The posterior rhinoscopic image shows the enlarged bluish grey posterior

extremities of the inferior turbinates, which touch the septum and each other, and a small quantity of adenoid growths still remaining on the posterior wall of the naso-pharynx.

*Case of Cleft Palate with Great Hypertrophy of the Inferior Turbinates.* Shown by Dr. EDWARD LAW.

Patient, aged twenty-two, came to the hospital complaining of a serious impediment to distinct articulation.

On examining the oro-pharynx, a longitudinal fissure is seen passing through the soft and hard palate in the middle line as far as the alveolus. The anterior portion of the cleft is filled up by the apposition of the wrinkled, dark, purplish grey, greatly hypertrophied lower border of the inferior turbinates. The rhinoscope shows the Eustachian orifices to be small and contracted, and, under ordinary conditions, covered or seriously encroached upon by the hypertrophied tissue of the inferior turbinates. There is no deafness or other aural symptoms, although the tympanic membranes are opaque and retracted. The parts are much changed on the application of cocaine. The cavernous structure of the two bodies shrinks and separates, giving a distinct view of the middle turbinal bodies, also enlarged, and of the nasal septum, which is apparently incomplete in the posterior and inferior segment, running upwards and backwards until it coalesces with the posterior wall of the vault of the pharynx.

The cases are shown because such enlarged turbinal masses are not sufficiently described or depicted in surgical treatises, and to ask for opinions as to the advisability of operative interference. The hypertrophied structures probably perform a conservative process by blocking up the gap and so acting as an imperfect obturator.

Mr. CRESSWELL BABER said he had frequently seen enlarged inferior turbinated bodies and adenoid vegetations in the cleft palate, and attributed them to irritation of the air passing direct into the naso-pharynx through the mouth. It might be necessary on operating to remove the hypertrophies and adenoids. Nasal obstruction is also sometimes increased in these cases by deflection of the septum, which is adherent to one edge of a cleft in the hard palate.

Dr. SCANES SPICER suggested that the greatly hypertrophied inferior turbinated bodies should be removed in these cases in order to give comfortable nasal respiration after the cleft palates were operated on and closed. He asked the general surgeons present whether such a previous procedure would not have a favourable influence on the palate operations, as nasal respiration lessened the tension of the soft palate, whereas buccal respiration increased it.

Dr. GRANT pointed out the value of the pad formed by the enlarged inferior turbinates in aiding the patient to drink, and therefore should hesitate in advising their removal.

Dr. HILL thought the extreme hypertrophy of the inferior turbinates might be due to the irritation caused by direct contact of food. He had removed the posterior extremities in other cases previous to the operation for cleft palate.

Mr. BOWLBY stated that in two cases he had found it necessary to

remove masses of adenoids previous to operating for cleft palate, as their presence hindered the closing of the gap.

MR. CHARTERS SYMONDS had sometimes found a pad of adenoids give support to palate after operation, but suggested removal in Dr. Law's first case.

MR. SPENCER, referring to Case 2, said that the arch of the palate was flat, and the muco-periosteum very thin ; therefore the case was not a favourable one for another attempt at union. The patient requires an upper tooth-plate to set out the sunken upper lip and replace carious and absent teeth. The plate can at the same time be made to act as an obturator.

MR. DE SANTI thought that the age of the patient was no contra-indication to an operation to remedy the cleft palate. He had known a lady of thirty-five who had been operated on for a very extensive cleft palate. It was most successful. He pointed out that the voice often remained much the same after even a successful operation on account of the shape of the hard palate.

DR. LAW, in reply, stated that he did not consider the age in either case an absolute contra-indication ; at the same time one must remember that both patients only complained of indistinct nasal speech with some obstruction. Closure of the cleft (such a successful result of operative measures is by no means certain) may in no way remedy the defective articulation, even after a long course of training. The thin cicatrix and tension in the first case and the low palate and broad fissure in the second, are not favourable features. These considerations, with the slight mortality, rather point to leaving matters alone, and placing the patients in the hands of the dental surgeon. The removal of the enlarged turbinal masses before closing the fissure might be followed by regurgitation of liquids through the nose and other disagreeable symptoms if the subsequent operation was not successful.

*A Method of Examining the Larynx in Infants.* Shown by DR. LACK.

The method is an extremely simple one, and no special instruments are necessary. The infant is supported in the usual position for laryngoscopy. The index finger of the left hand is passed well into the mouth, and the terminal phalanx hooked round the hyoid bone, which is pulled forwards. The rest of the finger acts as a tongue depressor, and the knuckle as a gag. The left thumb placed under the chin serves to steady the head. If a small laryngeal mirror be now introduced in the usual way, the larynx can be quite easily seen. The method causes no pain, no anæsthetic is required, and it is applicable to every case. For some months I have examined the larynx of every infant coming under my care, and have almost invariably succeeded at the first attempt. In older infants, those with teeth, I have used a curved tongue depressor—a copper spatula suitably bent—instead of the finger, and this method may be preferred by those laryngologists whose fingers occupy an inconvenient amount of the space afforded by an infant's mouth. It is not quite so easy, and some means of opening the mouth may be necessary. The younger the infant the less is the resistance, and the easier the examination.

The method seems to cause no more trouble than an examination of the fauces, and is consequently applicable as a routine practice. It is much easier than Kirstein's method, with which I have rarely succeeded, and which causes great inconvenience. Escat's method, which has just been brought out, seems to be founded on a false principle, and to be quite impracticable without an anæsthetic.

The infant on whom I propose to demonstrate is one year nine months old, and is a typical case of congenital laryngeal stridor. The pathology of these cases remains undecided, but in this case the stridor is seen to be due to lateral approximation of the soft parts forming the upper aperture of the larynx, which flap together and vibrate on inspiration, and separate again slightly on expiration.

Dr. BOND, who had used the method in several cases, spoke highly of it.

Dr. WAGGETT pointed out that a tongue depressor ending in a slightly curved, forked extremity was in use in France, and was used on the same principle as Lack's method.

Dr. BEALE asked what were the limits of age for which Dr. Lack advocated this method.

Dr. SPICER said that hitherto in children he preferred general chloroform anæsthesia combined with local application of cocaine, as the patients were otherwise unmanageable. He proposed, however, to try Dr. Lack's method.

Dr. LACK, in reply, stated that the method he advocated was especially suitable for very young children, because in older ones he found no difficulty, as a rule, in using the ordinary method of laryngoscopic examination.

*Case of Bilateral Abductor Paralysis with Unilateral Paresis of Soft Palate and Pharynx.* Shown by Dr. LACK.

L. C., female, aged twenty-eight, a school teacher. For about seven months she has noticed impairment of the voice, and speaking required an unusual effort towards the end of the day. Three months ago she noticed a peculiar sound on inspiration when talking or on any exertion. This noise continued during sleep. At times she has had some difficulty in inspiration. The patient has always been anæmic, but has improved lately. She has always been very nervous. The family and previous history are unimportant.

*Present condition.*—The patient is somewhat anæmic and extremely neurotic. There is stridor on talking or on any exertion, and it continues and is usually much louder during sleep. She has had one severe attack of dyspnoea in the last two days, brought on by emotion. She has no trouble in swallowing.

On examination of the larynx there is seen to be bilateral abductor paralysis, complete on the right side, but the left cord seems to have slight movement. Both cords are much congested. The right half of the soft palate and pharynx are paretic, but not entirely paralyzed. The tongue is much wasted, and the intrinsic muscles are paralyzed. She cannot raise the tip.

There is slight nystagmus on extreme outward rotation, more espe-

cially to the right, probably due to weakness of the external rectus. There is possibly also some wasting of the hypothenar eminence and of the interossei in the left hand, but it is very slight, and there is no apparent loss of power.

Dr. James Taylor thinks the lesion is probably in the medulla. At his suggestion the patient has been treated with large and increasing doses of strychnine.

The condition has remained stationary for the last two months.

*Tuberculosis of Larynx.*

Dr. WATSON WILLIAMS (Bristol) showed a coloured drawing of a case of laryngeal tuberculosis of the right vocal cord and the ventricular bands, which he had treated by curettement and the local application of concentrated lactic acid, pure guaiacol, etc. He drew attention to the sedative effect of strong guaiacol applications adding much value to its germicidal action in tubercular lesions. He remarked on the advantage of combining phenazenum and cocaine with lactic acid in the form of a watery spray solution in these affections of the upper respiratory tract.

Dr. CLIFFORD BEALE called attention to the fact that the case described and figured by Dr. Watson Williams showed no signs of tubercular infiltration. The lesion appeared to be superficial only, and as such was amenable to successful treatment by scraping and the application of lactic acid; whereas in the cases of actual submucous infiltration the results of curettement were but rarely successful. A great distinction ought to be made, in describing cases of cured tubercular laryngitis, between those cases where infiltration was present and those in which the lesion was superficial. The latter sometimes recovered without local treatment, or were improved by the application of simple astringents.

Dr. WATSON WILLIAMS, in reply, stated that cases of tumefaction had in his experience done well with curettement and lactic acid applications.

*Lupus of the Larynx and Tuberculosis of the Lungs.* Shown by Dr. STCLAIR THOMSON.

This patient was shown in order to elicit from the Society its opinion as to the association of these two conditions. Between lupus of the skin and phthisis there is acknowledged to be a close relationship, but in one of his most recent publications Bosworth states that he finds but a single case, viz., that of Thoma, in which lupus of the throat occurred in an individual showing evidence of tuberculous deposit in other regions ("Twentieth Century Practice," Vol. VI., 1896). Now, in this case a man aged twenty-one presented lupus of the epiglottis, while there were phthisical symptoms in both lungs, with tubercle bacilli in the sputum. There was also some lupus on the skin of the nose, as well as inside the left nostril, but the history of the case (it commenced with epistaxis) indicated that the lupus had first attacked the mucous membrane of the left nostril, then the skin over the tip of the nose, and lastly the epiglottis. As regards the lungs, there were neither fever, night sweats, nor hæmoptysis, and the patient had gained in weight.

Mr. STEWART said that he thought the case looked more like one of tubercular laryngitis than lupus.

Dr. LACK had seen two cases of lupus in the upper air tract ending in phthisis after some years.

Dr. BOND had had a somewhat similar experience.

*Perichondritis of Larynx arising in the Secondary Stage of Syphilis.*

Mr. SYMONDS showed a man, aged thirty-five, who applied at Guy's Hospital fourteen months ago with a phagedenic chancre of fourteen days' duration. While still progressing, and while the rash was present, hoarseness developed. This was about two and a half months from inoculation. Congestion of the left cord was first noticed; then it became fixed, and lost in the surrounding swelling. The voice for a time was reduced to a whisper. Subsequently ulceration of the septum nasi appeared. When exhibited, the left half of the larynx shows a hard infiltration with immobility of the cord. There was no ulceration, nor had there ever been any, and at no time was there expectoration. The epiglottis was somewhat curved, and obstructed the view. The patient had been regularly under mercury during the whole time. The voice has improved of late.

*Ulceration of the Right Ventricular Band with Impaired Mobility of the Cord.*

Mr. SYMONDS showed the case of S., aged fifty-four, who when seen on October 16th, 1896, complained of dryness of the throat, pain in the right side in swallowing, occasional loss of voice; symptoms had existed for six weeks. The right cord was red, and moved less freely than the left; no ulceration visible; the ventricular band was swollen and red. There was no sign of old syphilis, or gout or tubercle. The family history was excellent (eight living out of fourteen). There was no ataxy.

On October 30th the right cord was almost motionless. He was given mercury with potassium iodide.

November 26th. Though still red, the cord was thought to be more movable, and on two occasions his voice had returned. There was some ulceration of the ventricular band to be seen at this time, and Dr. Greville Macdonald, who saw the patient, thought the appearances indicated tubercle. The lungs gave no evidence, and no bacilli were found in the sputum. He has not lost flesh, and has never spat blood. He was ordered cod-liver oil and malt.

January 29th, 1897. The movement of the cord had improved, but the ulceration in the fore part of the ventricular band was more marked, was sharply defined in front with a raised border. No other part of the larynx had become affected. His health otherwise remained good, and his weight was maintained.

Opinions were asked as to the nature of the case, which seemed to lie between a chronic tubercular ulcer and early malignant disease. The congestion and impaired mobility of the cord suggested malignancy, and the raised edge of the ulcer pointed somewhat in the same direction, while the improvement in movement was opposed to this view.

Mr. BABER thought that the case was either tubercular or syphilitic.

Dr. BENNETT thought the case was one of tubercle, but remarked that the immobility of the cord was rather contrary to this view.

Dr. WATSON WILLIAMS thought that the general aspect of the infiltration, the tendency to pallor rather than hyperæmia, and the apparently superficial narrow ulceration along the margin of the ventricular band, were in favour of the lesion being tubercular rather than malignant disease.

*Tubercular Ulceration of the Septum.*

Mr. SYMONDS showed this lad, who was exhibited at the Society in 1895 with a swelling on the right side of the septum, of which various opinions were given. Subsequently Mr. Symonds reported that the mass removed was proved to be tubercular. For a time the disease was kept under by curetting; then in July, 1896, he received a blow on the nose, when rapid progress of the disease ensued, and in a fortnight the columella was destroyed and the alæ affected. On many occasions the nose has been scraped and lactic acid applied.

When shown, the interior of the nose could be well seen; the whole of the cartilage was destroyed, granulations were seen on both inferior turbinals, and there was ulceration of the skin. A small spot had appeared on the palate, but was better. The boy was otherwise in good health, and had much improved of late. He has been treated of late with lactic acid locally, and curetting from time to time.

Mr. CRESSWELL BABER asked if the growth had been freely curetted and treated with lactic acid at the early stage, as he had several times found that arrest the disease.

Mr. BOWLBY said that in some cases, in spite of treatment, destruction was very rapid, and that in one case he had seen the whole nose entirely destroyed in three months.

Dr. HILL thought that trichloroacetic acid twenty-five per cent. was more suitable in these cases, as lactic acid was not strong enough.

Mr. SYMONDS said the case had been freely curetted at first, and commenced healing, but then rapidly recurred.

*Case of Frontal Sinus Suppuration.* Shown by Dr. BENNETT.

Mrs. L., aged thirty-nine, had influenza in the early part of 1894, and from that time suffered severely with right frontal pain and a discharge from the nose. She came to the Leicester Infirmary in October, 1894, with an abscess over the right frontal region as large as a walnut, and a smaller one under the right eyebrow. In the right nostril there was a polypus and a considerable enlargement of the anterior end of the middle turbinal. She was at once admitted. Before opening externally, it was thought desirable to clear away all obstruction to the escape of pus from the sinus, and the polypus and the anterior portion of the turbinal were removed. Pressure on the abscesses caused a large quantity of pus to escape, and openings in the bone of considerable size could be felt through the skin. To secure still freer escape for the pus, the bone was cautiously chipped away from the neighbourhood of the infundibulum. So much

relief was experienced, and the amount of pus so materially diminished, that opening from without was postponed. After a few weeks all pain and all external swelling had disappeared. The patient now felt so well that for some months the only treatment adopted was the use of a cleansing spray. The patient then discontinued coming to the infirmary, as she felt quite well. In December, 1896, at my request, she came for examination, and granulation tissue was removed from the aperture, from which a small quantity of pus was exuding. The former openings in the bone were scarcely to be detected, having become closed with new bony material. The treatment proposed is to keep the nose clear of all granulation tissue which could in any way impede the escape of pus. The patient feels as well as she ever did before the influenza. The case was shown to illustrate the importance of commencing treatment in these cases by thoroughly clearing away all impediments to the escape of pus ; and also to invite the opinion of members as to the wisdom of continuing to watch the case, or whether it is advisable even now to open the sinus externally.

Mr. SPENCER said that a case under his care had suffered from septic inflammation of the eye, and the loss of acute vision, because of the delay before operating upon an empyema of the frontal sinus.

Mr. CRESSWELL BABER thought that in this case the discharge would probably not stop without further treatment, and that the slight risk of leaving it alone should be placed before the patient. He advocated, in these cases, obtaining a free access to the duct of the frontal sinus by removing any growths, and the anterior end of the middle turbinated body before opening the sinus from without, but deprecated any forcible entry into the sinus from the nose.

Dr. SCANES SPICER thought that Dr. Bennett had done the best in attacking the frontal sinus empyema through the nose by resecting the anterior extremity of the middle turbinated body. He thought that there was also disease of the ethmoid cells here, and that cautious curetting followed by passage of a Grünwald's frontal sinus canula, and gentle washing out, *might* lead to further improvement.

Dr. HERBERT TILLEY said that the question of operating or not on these cases of chronic frontal sinus suppuration was one for careful consideration, and weighing of the merits of the individual case. Intranasal treatment gave great relief but rarely cure, and some patients preferred the inconvenience of a slight flow of pus, with its comparatively small risk, to the uncertain results of an external operation, where the chances of a recurrence, an external fistula, and a scar had to be borne in mind, and should be laid before the patient. Dr. Tilley had recently operated successfully on a case of long standing, where both sinuses and antra were diseased, and had adopted Luc's method, which consisted of establishing a free communication between the sinuses and the nose, and inserting a self-retaining tube for some days (in his case five) after the operation.

Dr. HILL thought the case should be treated surgically with a view to radical cure.

Dr. SPICER and Mr. CHARTERS SYMONDS also made remarks on the

case, the latter recalling a case in which he had found the dura mater exposed in the sinus.

*Case of Tumour of the Uvula.* Shown by Dr. BENNETT.

The specimen shown was removed by Mr. Bond, of Leicester, from the palate of a child aged six. It had probably existed for years, but no certain information could be obtained. The only troublesome effect was the interference with distinct speech. On examination a tumour about the size of a walnut was seen, apparently confined to the uvula, but digital examination showed that it extended upward towards the hard palate. It was removed by dividing the mucous membrane and shelling it out, except for the strands of tissue which passed up, but the exact point of origin could not be determined. The microscopical report was in favour of the growth being of a simple nature.

*Case for Diagnosis : an Affection of the Mouth and Lower Jaw.*

Mr. LAWRENCE showed the patient, a female aged twenty-five, married five years, never pregnant. She was well till four months ago, when she noticed a swelling of the gum over inner right alveolus. Then there appeared a lump over the left cheek, which got larger and broke, giving exit to "matter." Next a swelling arose on the right side over the lower jaw. Her present condition shows : (*a*) enlargement of gum over right inner alveolar border, (*b*) superficial ulceration over right half of palate, (*c*) an abscess on right side of lower jaw, (*d*) on left cheek a very large granulating surface, and below it a breaking down glandular mass. During the last two or three days a mass has developed in the right groin, following one which appeared some weeks ago. There has never been a rash or history of syphilis.

Dr. HERBERT TILLEY suggested that the fluctuating swellings should be opened and the pus examined for actinomycotic fungi, and cited a somewhat similar case which was described by Israel.

Mr. DE SANTI was of opinion that this was not a case of actinomycosis. He had seen six or seven cases, and in all the course of the disease had been very chronic, and the appearance of the granulations quite different to that shown by Mr. Lawrence. There was an absence of the peculiar yellow points seen in actinomycosis, and also of any induration. He thought it possibly a mixture of tubercle and syphilis.

Mr. BOWLBY thought the rapidity of the growth and acuteness of the suppuration, and the extent of the glandular infection, were unlike actinomycosis. He thought the ulceration of the palate was syphilitic, and the ulcerating growth on cheek with suppurating glands more like tubercle, these latter conditions suggesting tubercle as the cause of the whole process.

Dr. LIEVEN (Aix-la-Chapelle) also considered the palate ulceration syphilitic and the swellings tubercular, an opinion also shared by Dr. STCLAIR THOMSON.

Mr. SPENCER thought the lesions on the cheeks tubercular, and advised erosion. He thought actinomycosis unlikely, owing to the lack of infiltration and brawny swelling.

*Case of Perichondritis of Larynx with Appearances simulating Paralysis of Cords.* Shown by Dr. HERBERT TILLEY. (Kindly lent by Mr. Barker, of University College Hospital.)

Patient is a man aged thirty-five, who complained of hoarseness and pain on swallowing. He has had syphilis, and a bad attack of rheumatic fever twelve months ago. There are no chest lesions. His symptoms commenced nine months ago with difficulty of breathing and pain on swallowing. The difficulty has disappeared, but the pain slowly increases, and radiates now from his throat over the side of his head, and there is great tenderness and pain when external pressure is applied to the larynx.

1. The right vocal cord is fixed in the cadaveric position as in complete abductor paralysis.
2. The left cord is only slightly movable.
3. The arytenoids move very slightly on phonation.
4. There is a curious lobster-tailed swelling of the mucous membrane of the left arytenoid cartilage.

*Case of Doubtful Early Malignant Disease of Larynx.*

Dr. SCANES SPICER showed a male patient, aged fifty-eight, who had suffered from hoarseness, which commenced four months ago, and had gradually increased. This was associated with a feeling of lump in the throat, and some little difficulty in swallowing.

Laryngoscopic examination showed the right vocal cord to be immobile, and in the cadaveric position; there was slight general thickening above and below, but no distinct tumour or ulceration; the right arytenoid pyramid was slightly displaced backwards. There had been no pain or hæmorrhage: no history or evidence of syphilis or tuberculosis. The patient had taken 15 gr. doses of iodide thrice daily for a month with no change.

The appearances and character of voice suggested early malignant disease, and as the pathological changes were intrinsic and unilateral, and there was no glandular enlargement, Dr. Scanes Spicer thought the case a favourable one for radical operation; but before proposing this he would like the opinion of the Society on the case.

Mr. DE SANTI thought the appearances of the larynx were suggestive of early malignant disease.

*Hypertrophic Pharyngitis and Tonsillitis with Chronic Enlargement of Parotids and Submaxillary Glands.* Shown by Mr. SPENCER.

A man, aged twenty-five, had some superficial tubercular lesions which healed after erosion; also various acne patches and blepharitis. He next had a febrile temperature for some time without any definite cause being found. He has the last two months suffered from inflammation of the pharynx, tonsils, etc., and the parotids and submaxillary glands have become much enlarged, and are hard but painless. The mouth is somewhat dry, but no crusts have been seen.

Dr. LACK thought the case possibly syphilitic, and Dr. BENNETT suggested that arsenic should be administered.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND  
OTOLOGICAL ASSOCIATION.

*Ordinary Meeting, January 29th, 1897.*

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Dr. WM. MILLIGAN, *President.*

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MR. LENNOX BROWNE. *Three Cases of Fibroma of the Palate treated by Electrolysis.*

These three cases represent a growth not, I think, very common. Although they have some elements of sarcoma they appear to be chiefly fibromata, and to commence at the boundary of the tendinous expansion of the levator palati muscle; in other words, at the junction of the hard and soft palate. Each of the three cases has been one-sided, and, curiously enough, all on the left side. Those I have seen have presented symptoms of inconvenience rather than danger; nevertheless, in the second case, the hæmorrhage threatened to be really alarming. Their chief interest is to demonstrate the result of electrolytic treatment. This has been so successful that we have present two of the patients, nine and seven years after their first coming under my care, who are so good as to visit us at somewhat personal inconvenience, that they may undergo inspection.

As to the treatment: one begins with four cells of a twenty-cell Leclanché battery, which may be increased to fourteen or fifteen during the sitting, and as the patient becomes accustomed to it. Daily application is required for the first twenty sittings, and afterwards less frequently.

Mr. A. Z., a professor of music, aged forty-three, consulted me in July, 1888, on account of a tumour of the soft palate, which he said had been growing for several years, but had only caused him inconvenience for the last twelve months. When I first examined him it was the size of a Tangerine orange. He had had some difficulty in deglutition for nearly a year previous to his visit to me, but there was no alteration in his power to articulate. There had never been any hæmorrhage. He had consulted several other surgeons, and was told that the tumour was a cyst, but on making an exploratory puncture with a needle I found the growth to be solid.

Electrolysis was the treatment employed, which comprised in all thirty-two sittings, extending over a period of six weeks.

The applications were made in the early morning, and the patient was not prevented for even one day from following his profession, nor did he miss one single lesson to his pupils. At the present time his throat is in the same condition as it was when he left me, and with the exception of this occasion, when he is present by my invitation, his throat has not been examined by me for over nine years.

Case 2. Mrs. S., aged seventy-five, came to me early in July, 1888, with her daughter, by the advice of a medical friend, on account of a growth in the throat, which was not only an inconvenience from its size,

but had been the occasion of several severe hæmorrhages. It was of deep red colour, and of the size of a Tangerine half-orange ; the tissues all around were vascular, but with a distinct excess of colour over the faucial area of the left side as distinguished from the unaffected side. Encouraged by the result of the former case, I commenced electrolysis. At the earlier sittings there was considerable hæmorrhage on the least puncture, and on one occasion the bleeding was so free that the patient had to remain some hours in my house for the application of styptics. The patient was under treatment during July and August. The growth was very much reduced in size, and the hæmorrhagic attacks ceased, so much so that she was quite content with the result.

In November I received a note from her daughter to the effect that her mother had remained *in statu quo* during the interval of three months since her last visit.

I saw her occasionally during the next three years, and I afterwards learnt that she died from natural causes without having had any further attacks of bleeding, or any inconvenience whatever with her throat.

Case 3. The Rev. I. K., aged fifty-five, was first seen on May 23rd, 1890. He had previously consulted other specialists and surgeons, all of whom had diagnosed malignant growth, and advised extirpation ; another had applied the galvano-cautery deeply into the tissue, which produced an open fungating sore, together with an acute œdematous inflammation of the mouth and face, which lasted for some weeks.

The patient was sent to me by my colleague Mr. Nunn, who thought it a case favourable for electrolysis. An oval tumour, which to use the patient's own words, was of the circumference of a four-shilling piece, was situated on the left side of the fauces on the anterior pillar just above and in front of the tonsil.

At that time none of the growth was removed, for hæmorrhage was feared, but after the first application of electrolysis, which was at once commenced, and no hæmorrhage occurring from the punctures, a portion of the growth was removed, and the microscopical report, dated June 30th, 1890, was as follows—"The superficial and older portion is so dense that no stretch of the imagination would define it as being malignant ; yet the deeper part has a very suspicious appearance strongly suggestive of sarcoma. Still, I should hesitate to distinguish it as sarcoma, and should strongly incline to the belief that it is either an innocent fibroma or else that it is a sarcomatous growth undergoing an atrophic process."

This report by Mr. Wingrave was confirmed by an independent examination by Dr. Walter Fowler.

Another portion was removed in October, and the following report was made by Mr. Wingrave :—"Superficially it is covered with stratified epithelium arranged in papillæ, identical with that lining the mouth. Beneath this is a dense stratum of closely-packed fusiform cells radiating in hand-like masses in all directions. More deeply the cells grow larger and less closely packed ; nuclei are much larger, and cells lose their fusiform character, becoming rounded and packed in a homogeneous matrix. Blood vessels are small, few, and imperfectly formed. The growth is undoubtedly neoplastic, but from the dense fibrous nature of the super-

ficial portion its growth must be very slow ; hence it would be unjustifiable to describe it as malignant."

Mr. Wingrave reminds me that he had also examined the first case, and that the features of the growth were almost identical with this, but unfortunately the notes have been lost.

The treatment which was adopted was electrolysis, for the maximum period of ten to twenty sittings during a year, which has been kept up at regular intervals of periods of three weeks, with two or three exceptions, when there appeared to be any increase in the activity, when the patient had it applied daily for a period of two weeks.

He has gained in weight considerably, his general health is good, and he has little or no pain or inconvenience from the local trouble.

Moreover, as chaplain to one of Her Majesty's jails, he has never once failed to perform his duties during the whole time he has been under my care. The edges of the growth have from time to time exhibited a tendency to become hypertrophied, but have been rapidly reduced by the electrolytic treatment. Constitutional treatment has been almost *nil*, and then only adopted for slight ailments.

Mr. WYATT WINGRAVE had examined microscopically a specimen from one of these cases, and two others treated by the same method. In each instance the cell nuclei showed very eccentric forms, quite unlike those characteristic of mitosis, and probably indicative of a retrograde metamorphosis.

Dr. A. SANDFORD read notes of a *Case of Epithelioma of the Auricle; Removal; Recurrence.*

M. H., male, aged fifty-six, came into hospital in September, 1896, with an unusually large epitheliomatous growth from the right auricle (photograph exhibited). The history was the common one of a small warty growth appearing some two years previously, from which he picked off the "scab" from time to time ; of late the increase in size was more rapid, until it reached that of a small apple. There was no appearance of glandular involvement, and I removed the auricle with the growth in its entirety. The wound healed rapidly. Some three months afterwards he reappeared with malignant enlargement of the parotid, so extensive that further operation was considered inadvisable. The cicatrix remains still absolutely healthy.

Dr. MILLIGAN regarded epithelium of the auricle as distinctly more common than most text-books usually admitted. He advocated free removal of tissue, and commented upon the late appearance of enlarged glands in such cases.

Dr. A. SANDFORD read notes of a *Case of Hæmorrhage from the Lateral Sinus after Mastoid Operation.*

The patient was a delicate, strumous girl aged fifteen. She came into hospital with a history of continuous discharge from the meatus, accompanied by intermittent pain and swelling over the mastoid, existing for some three months. The drum was perforated. I opened the mastoid antrum, removed a quantity of grumous pus, washed out the cavity, and established free communication with the meatus.

Just before proceeding to dress the wound I gave a scoop to an assistant, in order that he might learn the extent and limitations of the cavity. Apparently he was somewhat vigorous in his manipulations, as his investigations were interrupted by a copious flow of venous blood in very alarming quantities. I immediately plugged the cavity with iodoform gauze, and left this *in situ* for three days. On removal there recurred further venous hæmorrhage to a less extent. I did not remove the second plug for a week. There was no further bleeding, and the wound eventually healed satisfactorily.

I saw the patient last week and found the drum healed, no discharge or pain, and hearing watch at eighteen inches. I think the case indicates the advisability of extreme gentleness in curetting the mastoid cavity.

Dr. MILLIGAN said that on two occasions he had had the misfortune to open the lateral sinus during the course of operating. In both cases he had packed the part with iodoform gauze, and in neither case had any bad result followed. He now operated entirely with the mallet and gouge, and had the parts fully illuminated by means of a limelight search apparatus.

Mr. F. MARSH related this case: *Cyst of Pharynx, associated with Cystic Bronchocele, and probably of Thyroid Origin.*

The patient, a married woman aged fifty-five, came to the Birmingham and Midland Ear and Throat Hospital in January, 1896. She had had a bronchocele for twenty-eight years, which had gradually increased in size, but had caused no inconvenience until about four years ago. She then began to suffer from a choking sensation and cough, with much frothy mucous secretion. The cough persisted, and for the last two years she has had dyspnœa, which is worse when she lies down. She has also had dysphagia for the last three months, which four days ago became almost absolute, and associated with loss of voice and increased dyspnœa.

There has not at any time been any sudden increase in the size of the bronchocele. On examination she was found to have a large bronchocele with several well-defined cysts, which were tense but not inflamed, and most marked on the right side. On examining the pharynx a large bluish swelling, the size of an orange, almost filling the lower part, was seen, the upper surface being about level with the root of the tongue. There was distinct fluctuation, which did not seem to pass to any of the external cysts. It was attached to the right lateral and posterior walls of the pharynx, and the lower limits could not be reached with the fingers.

As asphyxia was imminent, immediate interference was necessary, and some ounces of pale yellowish glairy fluid were drawn off with a small aspirator, to the great relief of the patient. The cyst gradually refilled, so a week later a free incision was made. The opening did not long remain patent, and it was necessary to repeat the process at intervals of about a week. In February she was admitted into hospital with the view of something more radical being done, but she was in a feeble con-

dition and subject to frequent attacks of syncope, so it was thought advisable to be content with the palliative treatment. The incisions were kept open by the daily use of the probe, and repeated when necessary, and the cyst gradually became smaller and refilled much more slowly, and she went home on March 12th much relieved. One or two openings had subsequently to be made at increasingly longer intervals, and she kept free from her previous troublesome symptoms, and ceased attendance at the hospital. There had been no change in the size of the bronchocele.

On July 8th Mr. Marsh was asked to see her in consultation with her medical attendant, as she had a return of the dyspnœa. The cyst was hardly discoverable, and the dyspnœa was due to acute pleuro-pneumonia, from which she died the day following. No *post-mortem* was practicable.

The case is interesting from several points of view. (1) The origin of the cyst: was it a true thyroid cyst which had found its way between the constrictors, or was it in connection with an accessory thyroid? The former was considered the more probable. (2) The diagnosis: the symptoms were those often produced by pressure, and the true cause might have been overlooked, because not suspected nor looked for. (3) The treatment: enucleation would have been the ideal treatment; this would have been difficult if not impossible through the mouth, as the cyst extended out of reach. Enucleation by external incision and removal of the cyst on the right side, with possibly part of the right lobe of thyroid, was contemplated, but could not be attempted owing to the physical condition of the patient. Injections were not thought suitable, the risk of inflammation following being great. This risk was also incurred, but perhaps to a less degree, by the treatment adopted, and it is satisfactory to record its ultimate success without an untoward symptom.

#### *Rhinolith.*

Mr. F. MARSH showed a rhinolith of irregular shape which he had removed from the left nostril of a young woman, who for twelve months had suffered stenosis and purulent discharge on that side. The feature of interest in the case was a marked deflection of the cartilage of the septum to the left side, behind which the rhinolith lay concealed, the symptoms being attributed to the deflection. There was no history of the introduction, accidentally or otherwise, of a foreign body, but a section of the rhinolith showed the nucleus was a mother-of-pearl button, which had somehow found its way behind the deflection, and had gradually become coated with lime salts. There was some difficulty in the extraction, owing to the deflection and the granulations in which part of the calculus was embedded.

Mr. BARK said that this case emphasized the necessity for a thorough examination with the probe in all cases of septal deviation.

Mr. MAYO COLLIER showed the following cases:—

#### *Case 1. Abductor Paralysis of Left Vocal Cord.*

This case, a young woman aged twenty-five, exhibited complete paralysis of the left abductor muscle, leaving the left vocal cord adducted permanently to the middle line. There was no apparent cause; no history of severe illness, mental or physical strain, syphilis, tubercle, or tumour

pressing on recurrent laryngeal. The symptoms dated six months back, when the patient first noticed some impairment of vocalization. This soon—within a week—culminated in marked hoarseness and some dyspnœa. The case was then treated with tonics and local astringents. On a subsequent examination the chest was carefully examined by a skilled physician, as nothing could be made out to indicate pressure on the recurrent nerve within the chest. There was marked enlargement and displacement downward of the heart, the apex beat being one and a half inches below and external to the nipple, without apparent cause. The voice was at the present time excellent, affording no indication of any laryngeal defects. The general health was good.

Dr. MILLIGAN said that he was unable to detect any absolute symptoms of thoracic aneurism in Mr. Collier's patient, and there was an absence of any rheumatic history, or of any special strain: factors which, if present, might have helped to support the diagnosis arrived at. He had seen cases of aneurismal dilatation with left abductor paralysis in comparatively young subjects, and one such case came prominently to his mind where there was marked episternal pulsation, tracheal tugging, and increase of dulness over the aortic region.

With regard to the voice in such cases, it was often quite remarkable how good it was despite the paralysis.

#### Case II. *Dyspnœa and Lingual Varix.*

Mr. MAYO COLLIER, in the absence of the patient, read the notes of a case of severe paroxysmal dyspnœa, apparently the result of lingual varix.

The patient, aged thirty-two, was married and in good circumstances, also the mother of two healthy children. There was no history of hysteria or nervous disorders. Fourteen years ago, after a prolonged effort in nursing a relative, the patient developed some protrusion of both eyeballs, and some enlargement with pulsation of the thyroid gland. Since then her health had been good until the last six months. Latterly there had been much loss of flesh, extreme weakness, great depression, and loss of sleep. A marked symptom of the case was profuse sweating at all times during the day—never at night. Two months ago she was first troubled with attacks of dyspnœa, associated with a feeling of choking and strangulation. These attacks varied in frequency, but lately had culminated almost into a permanency.

Attacks now lasted, constantly, two hours, with five minutes' intermission. They were entirely absent at nights. The case now exciting some alarm, I was requested to examine the larynx and throat.

A careful examination of the larynx and nose gave no clue to the trouble. No indications of disease were to be found in the heart lungs, chest, or abdomen generally. There was a marked swelling at the root of the tongue, rising quite three-fourths of an inch above the epiglottis, and partially burying that structure. This enlargement was striated with large blue veins, coursing from before backwards. I advised a re-examination of the chest and abdomen by an expert, and Dr. Douglas Powell being chosen, discovered no cause for the dyspnœa.

We agreed to operate on the lingual varix with the galvano-cautery.

The first operation gave relief—less frequency of attacks, less duration; the second operation, total cessation for ten days; and the third, complete relief. Tonics and general treatment were associated with the operative measures.

Case III. *Stenosis of Trachea.*

Mr. MAYO COLLIER exhibited Mrs. E., aged seventy, the subject of double stenosis of the trachea from pressure.

Eighteen months ago the patient presented herself with severe and marked dyspnœa to an alarming degree. Examination revealed a tumour of the thyroid pressing on the front right lateral aspect, an inch below the cricoid cartilage. With the laryngoscope a marked bulging inwards of the windpipe could be seen.

An operation revealed an encysted adenoma of the thyroid, and its removal afforded complete relief.

Six months afterwards Mrs. E. again presented herself with a return of alarming symptoms of dyspnœa, and some enlargement of the thyroid gland in a downward direction.

An examination revealed two hard masses, one on each side of the trachea, low down in the root of the neck.

An examination with the laryngoscope was difficult, on account of the dyspnœa, but with tact and patience a view could be obtained of the trachea.

About one and a half inches above the bifurcation the circular lumen of the tube was replaced by a bilateral slit a quarter of an inch in extent.

Matters becoming critical, a consultation was held with Mr. Pitts, and further operative measures being almost out of the question as hopeless, it was decided to try the effects of arsenic and iodide of potassium.

A mixture composed of ol. morrhue, syrupi ferri, iodide, arsenic, and glycerine was ordered. Some improvement was quickly apparent; larger doses were resorted to, and administered continuously for twelve months.

The case, as now presented, is practically cured, her health being good, and breathing easy except on violent exertion.

The lessened tumours of the thyroid can still be felt, and some stenosis of the trachea is still apparent.

Dr. MILLIGAN congratulated Mr. Collier upon the result of his operation. He would like to ask Mr. Collier if he could give any explanation of the keloid character of the scar which was present. In several cases of operations upon the thyroid gland he had noticed this peculiar character in the cicatrix, and had often wondered what was the correct explanation of its presence.

Mr. WYATT WINGRAVE suggested that the growths might be from the parathyroid, since they conformed to the histological structure of that organ.

Case IV. *Syphilis of Nose and Larynx.*

Mr. COLLIER showed to the Society a married woman, aged thirty-eight, the victim of syphilis. The syphilis had, apparently, spared all other parts of her body except the nose cavities and larynx.

Two years ago syphilitic ulceration of the nose resulted in almost total loss of the septum, including the cartilage. The cicatrix had almost obliterated the anterior nares, two small sinuses being all that is now left for nasal respiration.

A recent attack of syphilitic ulceration of the left cord and ventricular band almost ended fatally. Tracheotomy was several times demanded, but the patient tided over the necessity. Mercury and iodide of potassium, alone or in combination, increased the swelling of the parts, and made matters worse. Opium in half-grain doses, four times a day, had a marked effect on the cough and dyspnoea. Subsequently, opium associated with two grains of blue pill, twice daily, has done much good. The larynx has now recovered with little permanent damage, and the voice, although slightly hoarse, is good.

MR. WYATT WINGRAVE. *Functional Aphonia in a Girl aged Ten.*

The patient, a bright but slightly pale little girl aged ten, looking several years younger, was brought by her mother with the statement that six weeks previously she suddenly lost her voice, this being attributed to wetting her feet. There had been no feverish or other symptoms. On examination she was found to be aphonic, neither cord moving in adduction. Beyond this, and a somewhat florid state of pharynx and larynx, the parts were healthy. There were no adenoids, and all her organs were apparently normal. Application of a weak interrupted current immediately restored the voice, which remains normal. The case is interesting from the early age of the patient and the absence of any apparent cause beyond the indication of some slight anæmia.

The case was seen in Dr. Grant's absence, and it was through his courtesy that the case is shown.

Dr. MILLIGAN commented upon the youth of Mr. Wingrave's patient, and asked if there was any history of fright. He also asked if there was any intestinal trouble. He had never seen functional aphonia in such a young subject, although he had seen it in a girl aged fifteen. Regarding the treatment of functional aphonia, he had frequently been disappointed with the numerous relapses such patients had, and would like to know what was Mr. Wingrave's usual line of treatment.

Mr. BARK found the galvanic and faradic currents useful in many cases of hysterical aphonia; but relapses were the rule, and he depended more on general treatment for permanent results. He thought the interesting feature of this case was the extreme youth of the patient, most of these cases occurring between the ages of fifteen and twenty-five.

Mr. WINGRAVE, in reply to the President and Mr. Marsh, said that the naso-pharynx was quite clear, and there was no evidence of intestinal irritation, parasitic or otherwise. He felt that the not infrequent failure of electric and medical treatment was due to non-insistence of vocal exercises. The diminished sensibility of the laryngeal mucous membrane in this case was remarkable.

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## CHICAGO ACADEMY OF MEDICINE.

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Dr. WM. L. BAUM *in the Chair.*

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Dr. HENRY GRADLE. *Diseases of the Nasal Accessory Cavities.*

In one hundred and forty-six unselected cadavers Fraenkel found disease of one or more accessory cavities in about forty per cent. Wolff found in twenty-two cadavers of children, dead of diphtheria, maxillary sinus involved in every case, and sphenoidal sinus involved in every case in which it was developed. The involvement was diphtheritic or catarrhal, according to the character of the disease in the nasal cavity.

Harke found in thirty children, dead of infectious diseases which affect the air passages, suppuration in one or more cavities in all instances, while in thirty-seven adults dead from the same diseases there were thirty-one cases of sinus involvement; and Dmochowski, who searched only for disease of antrum, found it twenty-eight times in one hundred and fifty-two unselected cadavers.

In all Fränkel's cases no diagnosis of sinus disease had been made. Till quite recently nothing was known of acute sinus disease, and slight cases probably still pass unnoticed. Where the disease is more serious pain is produced. This, in the case of maxillary disease, appears as a neuralgia of the fifth nerve; in that of the frontal as a supra-orbital neuralgia. As to the pain produced by acute disease of the sphenoid and ethmoid sinuses we know practically nothing. Most cases require no treatment beyond simple cleansing of the nose by the nasal douche, but if a case lasts more than two or three weeks we must interfere surgically.

Most clinical work pertains to chronic affections of the sinuses. Confining his attention principally to the antrum, the speaker said that transillumination was of great value, but in his experience sometimes misleading in both the positive and negative senses; absolute certainty could be obtained only by puncture, and this should be made through the alveolar process at the first molar, or as near to it as possible. For example, if one wished to save the tooth, it was generally easy to enter the antrum through the palatal side of the alveolar process, though on one occasion the speaker failed to find the antrum by this route. Having perforated the antrum, aspiration should be tried, but if it gave negative results syringing might bring pus away.

Cases of antral involvement generally occur in narrow noses. Stuffiness of the nose may be the only symptom, but as a rule others are present, *e.g.*, diffuse nasal catarrh (which may extend to pharynx, or even to the bronchial tubes, or to the ears), and reflexes, such as sneezing, coughing, asthma, etc. Again, affections of eye may occur, mostly slight—diagnosed asthenopia—more rarely severe. Of the latter the author

had seen two examples, the one an exudative chorio-retinitis, the other a neuro-retinitis ; both began to improve as soon as the antra were treated.

Fatal complications, *e.g.*, extension to the brain, phlebitis, or general septicæmia are extremely rare : probably not more than two dozen cases are on record.

As to treatment, the majority of cases of empyema of the antrum will heal under simple irrigation through an alveolar opening in from six weeks to three months. Those of older standing, where degeneration of the mucous membrane has taken place, require to be treated by free resection of anterior wall, and thorough curettement of the walls, etc.

Dr. W. X. SUDDUTH was not familiar with the statistics presented by Dr. Gradle, but his first impression was that they were of little value. His experience in *post-mortem* examinations led him to expect more or less evidence of inflammation in nearly every cavity in the body in cases coming to the *post-mortem* room.

The method of opening the antrum through the alveolus was the most unsuccessful of all. The best way was as follows : Open the antrum with a trephine—as a rule, above the first bicuspid tooth ; make sure that the nasal orifice is free ; cleanse the cavity ; introduce about  $1\frac{1}{4}$  inch of soft rubber catheter of the same calibre as the trephine used, and fix it by tying to one or two teeth ; have a plug to fit this ; and let patient syringe the cavity through this tube himself.

It was important to bear in mind that pus in the antrum might come from other diseased cavities ; cure these, and the antrum would recover without any direct treatment.

In diagnosis very little reliance could be placed on transillumination ; position and puncture and location of pain gave much more trustworthy information. In acute cases surgical interference was often unneeded.

Dr. FRED. G. OWSLEY said that in disease of the ethmoid and frontal sinus he had found almost constantly a swelling of the septum just below and in contact with the middle turbinate. It was not present in disease of the antrum.

Transillumination as a means of diagnosis was of little value, and the locality of pain was deceptive. As for treatment of the antrum, he preferred to open it through the inferior meatus with a drill ; but where the disease persisted he advocated a free resection of the anterior wall, followed by curetting and packing the cavity.

Dr. E. T. DICKERMAN had found treatment of the antrum through the mouth unsatisfactory except in very recent cases. The most reasonable plan was to open through the inferior meatus, introduce a trocar and canula, and to leave the canula *in situ*, so that syringing could be carried out by the patient painlessly.

Dr. W. L. BALLENGER referred to the important part played by the accessory cavities in prolonging ozæna. Unless they were treated, in many cases cures would not be obtained. He further protested against non-interference in acute cases.

Dr. BAUM asked for information as to the relationship of accessory cavity empyemata to erysipelas of the face.

Dr. E. S. TALBOT had examined the antra in three thousand skulls,

and had concluded that the best point to open through the alveolus was on the outer side of the alveolus, between the second bicuspid and first molar tooth. To attempt to open through the palatal side of the alveolus at the first molar meant in many cases missing the antrum altogether, and perforating the floor of the nose. He considered that antral disease was rarely due to disease of teeth. In these points Dr. FLETCHER agreed with him.

Dr. GRADLE replied.

Dr. N. H. PIERCE. *The Modern Pathology and Treatment of Acute Otitis Media.*

Acute otitis media may be catarrhal or may be suppurative. The kind of inflammation depends not on the kind of micro-organism present—for the same micro-organism may under different conditions give rise to various types of inflammation—but “depends on the intensity of “virulence, the number of the organisms, the resistance of the tissues, and “the rapidity of invasion” (Moore). In the writer’s opinion the difference is altogether due in a large majority of cases to the mode of invasion. When the invasion is hæmatogenous there results suppuration; when the invasion is through the Eustachian tube there results catarrhal inflammation. A catarrhal becomes a suppurative inflammation only when the substrata of the mucosa are invaded; so long, however, as the superficial layers only are affected the inflammation remains catarrhal.

The normal tympanum is not to be regarded as an aseptic cavity proper, but as a cavity producing an antiseptic secretion. “A drop of “this secretion transferred to a cover-glass and placed in a cell will remain “sterile until it quite dries up. A drop inoculated with an attenuated “culture of staphylococcus aureus and kept at a brood temperature in a “moist atmosphere was found sterile after ten hours.” The germicidal power, however, is easily destroyed, *e.g.*, by adding more staphylococci after the first four hours, or by mixing the secretion with one-fifth volume of egg albumen, or by adding a fraction of a drop of a one in one hundred solution of sulphate of zinc.

In treatment the author forbids local bleeding, poulticing, the use of anodyne or other drops in the meatus, and politizerization. Syringing the ear is to be avoided as much as possible. Before paracentesis the meatus is rendered aseptic by a moist antiseptic dressing, and after perforation drainage is secured by packing the meatus with antiseptic gauze. Delstanche’s rarefacteur is used instead of inflation.

Cold, applied by means of Leiter’s coil or the icebag, is generally preferred to heat; and where heat is necessary it is to be applied, not by poultices, but by antiseptic fomentations or the sandbag.

Paracentesis is used pretty freely. In fact the treatment may be summed up as paracentesis and drainage by antiseptic gauze, with, if required, a large antiseptic dressing over the ear to receive discharge and prevent its contact with the microbes in the air.

Dr. ADOLPH GEHRMANN thought that the character of the inflammation would depend largely on the kind of micro-organism present. “If we have those organisms which produce suppuration, the chances

"are suppuration will be the clinical symptom. If we have organisms in "pure cultures which do not produce suppuration, a serous inflammation, "or an inflammation without the production of much pus, will be the "clinical symptom."

Dr. F. W. OWSLEY said that in applying cold to the ear it ought to be kept on continuously for four hours, then intermitted for two hours, re-applied, and so on. He would permit paracentesis only in suppurative otitis media, but not in the simple form. In the latter politzerization and antiphlogistics generally sufficed to prevent suppuration. Again politzerization should be used where suppuration and perforation have occurred, in order to empty the tympanum of pus.

Dr. WM. H. WILDER doubted whether cold applied to the mastoid would have any effect on an acute otitis media, whereas he was certain that heat applied by irrigation was very beneficial. He agreed with Dr. Pierce as to the value of paracentesis in all cases where pain was not relieved by heat; but could not agree as to the dangers of politzerization. This he considered a useful and perfectly safe measure.

Dr. WM. L. BALLENGER: In a case of simple acute otitis media there is always some other inflammation present, generally naso-pharyngeal. If this be treated by aromatics and astringents and mild politzerization used, the necessity for paracentesis is often done away with.

Dr. EDWARD T. DICKERMAN agreed with everything the speaker had said.

Dr. GRADLE stated that in the purely catarrhal form of inflammation the same micro-organisms were to be found as in the suppurative form, viz., pneumococcus, staphylococcus, streptococcus, and occasionally pyocyaneus. The microbes might be the same, but the result depended on the resisting power of the organism.

He highly recommended the use, in the earliest stage of an acute otitis (*i.e.*, before one could tell what form of inflammation was present), of a fifteen per cent. solution of acid carbol in glycerine, and of gentle politzerization. This often relieved the pain and aborted the whole inflammation. On the whole he thoroughly agreed with the speaker as to treatment.

Some further discussion as to the advantages and dangers of politzerization in these cases took place, and Dr. PIERCE in his reply pointed out that by paracentesis all the advantages were obtained that were claimed for politzerization, and that without any of the dangers attending the latter.

*Arthur J. Hutchison.*

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FIRST SPANISH CONGRESS OF OTOTOLOGY, RHINOLOGY,  
AND LARYNGOLOGY.

November 20th, 1896. (*Special Report by Dr. RUEDA.*)

(Continued from page 124.)

President—Dr. VERDOS. Secretary—Dr. F. RUEDA.

SECTION OF LARYNGOLOGY.

FORUS. *Laryngeal Urticaria.*

CASADESUS, ROQUER (Barcelona). *On Laryngeal Ictus.*

The author has already published a typical example of the classical laryngeal ictus as described by Charcot. Recently he had had the opportunity of observing a second case. The phenomenon developed at the moment of a laryngeal examination, made with the object of discovering the cause of a tickling in the throat, accompanied by spasmodic cough. The phenomenon was accompanied by a clouding of the senses. No source of reflex irritation was found in the upper air passages. No history or evidence of hysteria or tabes was forthcoming, and for this reason the case must be regarded as of the classic type.

CASTANEDA (San Sebastian). *On a Form of Acute Laryngitis of Infants, resembling Croup.*

Two elements must be considered in the acute laryngitis of childhood—the inflammatory and the spasmodic. The inflammation, according to the degree of its development, varies in its clinical manifestations. Acute submucous laryngitis in children—often regarded as diphtheritic where no laryngoscopic examination is made—is worthy of study, particularly nowadays, when each case is liable to go down to the credit of the antitoxin treatment. This pathological condition, characterized anatomically by submucous infiltration, and bearing a misleading resemblance to acute oedema, with which, however, it is not to be identified, is manifested clinically as a suffocative catarrh. In twenty-four cases the author has found it located four times in the aryepiglottic folds, and fourteen times in the subglottic region.

A point of particular diagnostic importance is the association of an unimpaired voice with a hoarse cough—a condition which excludes the presence of false membrane on the vocal cords. Intubation is indicated when retraction is marked, the possibility of a secondary broncho-pneumonia being kept in mind, a complication which the intubation will only relieve. Tracheotomy is indicated in all cases where symptoms of tracheal inflammation are present.

MORENO, PEREZ. *Sulphide of Calcium in Exudative Pharyngitis.*

In view of the unsatisfactory results of all local forms of treatment, the author has made use of sulphide of calcium, and with encouraging results.

ARRESE (Bilbao). *Late Hereditary Syphilis and Adenoid Vegetations.*

The author recalls the influence of diathesis in the production of naso-pharyngeal vegetations, and the rôle of tuberculosis established by the work of Cornil, Dieulafoy, and Lermoyez, and puts on record the case of a child of seven years affected with hyperplasia of Luschka's tonsil. Operative measures did not result in cure, and specific treatment was necessary in view of the existence of hereditary syphilis.

CASADESUS, ROQUER (Barcelona). *Laryngeal Cancer; Aortic Aneurism; Tracheotomy; Sudden Death from Angina Pectoris.*

Occasion is taken in recording this case to point out the advisability of examining the great vessels before tracheotomy.

CASADESUS, ROQUER. *On the Therapeusis of Tracheocele.*

Remarks on a case, and on the methods of preventing enlargement of the sac, and also upon the surgery of the disease.

RUEDA (Madrid). *Angiomatous Tumour of the Larynx.*

The case of a woman of fifty-six, in which, without the patient suspecting it, a tumour of considerable size occupied the right side of the larynx, involving the ary-epiglottic fold and arytenoid of that side. In doubt as to the nature of the growth, which was movable and of a bluish red colour, the author aspirated with a Heryng's syringe and drew off a certain quantity of blood. On this account, and from other differential characteristics, the author arrives at a diagnosis of angioma.

#### SECTION OF OTOTOLOGY.

COMPAIRED. *Cure without Recurrence of Two Cases of Epithelioma of the Auricle and Meatus by Amputation, and After-Treatment with Chlorate of Potash.*

Both cases were examined histologically. The author recommends the routine employment of chlorate of potash powder in the dressing of the operation wound.

RUEDA. *Conservative Treatment in Affections of the Attic.*

The portio epitympanicus, or attic, may be considered for practical purposes as a cavity independent of the portio hypotympanicus, with which, in the normal condition, it is directly connected, but from which, in certain pathological conditions, it is separated. For this reason it has its own pathology, the distinction being justified also by its close anatomical relations with the dura mater and brain, the antrum, the facial canal, and the external semicircular canal.

Disease of the cavity may affect either the mucous membrane alone or the ossicles and walls, or may consist in the retention of cholesteatomatous masses or granulations, or all of these conditions may be present. Suppuration is present in all these modifications. With regard to treatment, the most important question to decide is the presence or absence of mastoid complications, the diagnosis of which must be particularly difficult in latent cases, since mastoid percussion, electric transillumination, etc., do not always, in practice, give decided information.

The systematic course to follow is always to commence with conservative treatment: destroying granulations, enlarging the perforation in Shrapnell's membrane, followed by antiseptic lavage with a suitable canula, in order to expel retained pus and cholesteatomatous masses. If this treatment has been employed for two months without cure, a radical operation can be resorted to: either that of Stacke, if no antral complication is present, or, if the antrum is infected, a clearance of that cavity and of the tympanum.

Powders, such as boric acid, aristol, iodoform, etc., should not be employed in the treatment, the object of which is, before anything else, the cleansing of the cavity and the expulsion of the retained matters. The employment of solid substances might prevent the free exit of pathological products.

*Ernest Waggett (Trans.).*

ABSTRACT OF THE LETTSOMIAN LECTURES ON  
DISEASES OF THE NOSE AND THROAT IN RELATION  
TO GENERAL MEDICINE.

*Delivered before the Medical Society of London, February 1st, 1897,*

By F. DE HAVILLAND HALL, M.D., F.R.C.P.Lond.,

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BEFORE entering upon a description of the nose and throat affections of the acute specific diseases I would like to accentuate the extreme importance of the nose and throat as the chief portals of entrance of the poisons, whatever they may be, which give rise to these diseases. Evidence is gradually being accumulated which points to the conclusion that people who suffer from nasal affections are more liable to contract infectious diseases, especially diphtheria, than healthy persons. In erysipelas of the face it is very frequently found that there is some chronic nasal affection, and that the erysipelatous blush started from the nose. This I have often been able to demonstrate in hospital cases under my care. If we except water-borne diseases, such as cholera and dysentery, almost all the other infectious diseases are conveyed by the air, and hence the morbid agent usually enters by way of the nasal cavities and pharynx, and here it proliferates during the first stage of incubation. Two cases of artificially produced disease of the nose brought forcibly before me the risk of operative procedures on the nasal mucous membrane in persons exposed to infectious diseases. In both these cases I had used the galvano-cautery for the cure of hypertrophic rhinitis, and in both symptoms of scarlet fever manifested themselves two or three days after the application of the cautery. The first case might be merely a coincidence, but the second case was that of a medical man who, as house physician at a London hospital, had been constantly exposed to the infection of scarlet fever without effect, until I unluckily made a way, as I believe, for the entrance of the germs through the abraded mucous membrane of the nose. The practical conclusions that I would draw from the above is the advisability of abstaining from operative procedures on the nasal mucous membrane during epidemics of influenza and other infectious diseases, as well as in the case of persons liable to be brought in contact with such diseases. I have also abstained from operating on medical students and others whose duties take them into the dissecting or *post-mortem* rooms. Lacunar tonsillitis occasionally follows intranasal cauterization. I have seen it in one or two cases of my own, and numerous instances are to be found recorded in the various special journals. The rôle played by the tonsils as a point of entrance of germs into the system is now becoming more generally recognized. Gerhardt has termed the tonsil a physiological

wound—an inlet guarded, however, by leucocytes, which protect the system against the entrance of these germs. If from any reason the energy of the leucocytes is diminished, or the tonsil is in an unhealthy condition, then the germs of diseases—such as scarlet fever, diphtheria, and other infectious diseases—gain access to the system. Tubercle bacilli can probably pass through the tonsils, and, without giving rise to any disturbance in them, may produce tuberculosis of the glands of the neck. Staphylococci, streptococci, and other micro-organisms can also find their way into the system through the tonsils. Adenoid vegetations in the nasopharynx have a similar action to the tonsils in this respect.

I will now proceed to describe at greater length the changes seen in the nose and throat as a result of the acute infectious diseases.

#### SMALL-POX.

This disease is occasionally ushered in with catarrhal symptoms—*e.g.*, sneezing, epistaxis, intolerance of light, lachrymation, sore-throat, with redness and some swelling of the palate and tonsils, and hoarseness, symptoms which it is important to emphasize, as they may cause the disease to be mistaken for measles. In the malignant form of small-pox there may be profuse epistaxis. The pustules of small-pox have been seen in the nostrils, mouth, pharynx, and larynx; they have even been noticed as low down as the bronchia of the second or third order. The eruption may occur on any part of the mouth; salivation is present and is very severe in the confluent form of the disease.<sup>1</sup> If the soft palate is affected there is usually much inflammatory swelling, and an abscess sometimes results. Owing to the moisture of the mouth the pocks seldom form well-marked pustules. At first they appear as whitish-grey slightly elevated spots, which soon soften and form superficial ulcerations, surrounded by a red zone. The larynx in small-pox may be the seat of an inflammatory process causing congestion of the mucous membrane, or there may be a papular or pustular eruption giving rise to but little discomfort. In severe cases, however, about from the ninth to the twelfth day, great swelling of the laryngeal mucous membrane may occur, and suffocative attacks due to œdema of the epiglottis and aryepiglottic folds come on. Trousseau records three cases in which the progress of the disease was so rapid that death occurred before relief could be obtained. In a case of hæmorrhagic small-pox, Morell Mackenzie<sup>2</sup> found “ecchymotic spots on the under surface of the epiglottis and on the “mucous membrane over the arytenoid cartilages”; and Gevaert<sup>3</sup> has described a case of submucous hæmorrhage in the aryepiglottic folds forming two thick sacs, and considerably interfering with access to the larynx. In some cases ulceration extends down to the cartilages, causing necrosis, and death may result from impaction of a piece of extruded cartilage in the glottis; or, owing to more or less destruction of the framework of the larynx and cicatricial contraction, stenosis may occur even after the lapse of many years. If the crico-arytenoid joint becomes

<sup>1</sup> Gibb: “Diseases of the Throat,” p. 285.

<sup>2</sup> “Diseases of the Throat and Nose,” Vol. I., p. 191.

<sup>3</sup> “Centralblatt für Laryngologie,” Vol. XII., p. 350.

involved in the inflammatory mischief ankylosis may occur, and the patient will recover with a permanently fixed cord ; this condition, rather than paralysis, is probably the explanation of two cases described by Morell Mackenzie,<sup>1</sup> in which he says permanent paralysis of the adductor of a vocal cord followed small-pox. As in the other acute specific diseases, the excoriated condition of the mucous membrane of the upper air passages renders it vulnerable to the bacillus of diphtheria ; hence a diphtheritic exudation may appear on the fauces, or the patient may have the signs of a membranous laryngitis. This form of laryngeal affection usually begins about the tenth day and runs a rapid and fatal course.

#### VARICELLA.

According to M. Rondot,<sup>2</sup> varicella is often accompanied by a mild sore throat, and he has been able to verify the existence of a varicellous eruption on the buccal mucous membrane even in the absence of a cutaneous manifestation. In this case the diagnosis is based on the objective character of the ulceration of the mouth, on the concomitant sore throat, and the presence of an epidemic of varicella. Whatever may be thought of a varicellous eruption limited to the mouth, there is no doubt that in typical cases of varicella vesicles with reddened bases may be seen on the palate ; on the lips, tongue, and cheeks small round superficial ulcers occur, seemingly the result of the breaking down of a vesicle—in other words, the eruption of varicella may occur on mucous membranes as well as on the skin. I would lay stress on this point, as Osler and some other writers do not mention the possible occurrence of the buccal eruption. Varicella resembles small-pox inasmuch as the eruption may occur, though very rarely, in the larynx.

#### MEASLES.

The sneezing and running from the nose, which are the earliest premonitory symptoms of measles, indicate the existence of an acute nasal catarrh. The discharge is at first clear and watery, but soon becomes muco-purulent and often excoriates the upper lip. As a rule the nasal catarrh disappears with the decline of the rash, but under unfavourable hygienic conditions in badly nourished children the discharge may continue and be the commencement of a chronic purulent rhinitis. Epistaxis may occur in the prodromal stage of measles, and in rare cases the loss of blood may be so great as to threaten life. According to Wolff<sup>3</sup> the accessory cavities of the nose are always affected in measles, sometimes with catarrhal inflammation, at others with purulent. This statement must, however, be received with a considerable amount of caution, especially with regard to purulent inflammation, in view of the rarity of acute affections of the nasal sinuses. On the second or third day of the disease hyperæmia of the roof of the mouth and soft palate is to be seen, followed by an eruption of small red points or patches, giving a stippled redness to the parts. The term "endanthem" has been

<sup>1</sup> *Loc. cit.*, Vol. I., p. 192.

<sup>2</sup> "Revue de Laryngologie," etc., 1890, p. 31.

<sup>3</sup> "Centralblatt für Laryngologie," Vol. XI., p. 961.

applied to this appearance. Inasmuch as this eruption is almost invariably present, and as it precedes the rash on the skin, it is of diagnostic importance where there is an unusually prolonged prodromal stage, and in dark races of mankind in whom it is very difficult to recognize the cutaneous eruption. In delicate children severe stomatitis and even cancrum oris may develop; I remember Dr. Gee impressing on me when a student that measles was the most common cause of cancrum oris. The prognosis in these cases is very grave. The tonsils and mucous membrane of the pharynx generally are inflamed and swollen; the inflammatory mischief occasionally spreads up the Eustachian tube and gives rise to earache or even otitis media, but the latter is very rare in comparison to what happens in scarlet fever. Catarrh of the larynx is as much a part of the disease as nasal catarrh. The hoarseness and constant, irritable cough, which are so frequently met with in the first stage of the disease, points to the implication of the larynx. Von Ziemssen<sup>1</sup> speaks of having repeatedly seen a deep uniform redness of the laryngeal mucous membrane, with a yellow-reddish colour of the vocal cords. In rare cases measles comes on with the symptoms of laryngeal obstruction, and as the rash comes out these subside. Owing to the tendency to spasm in children the cough is not infrequently of a croupy nature. In the severe forms of laryngitis ulceration of the mucous membrane and even an abscess may occur, or death may, in rare cases, be due to œdema of the larynx.

Membranous laryngitis is an infrequent but very dangerous complication of measles. According to Morell Mackenzie<sup>2</sup> it is even more fatal than the corresponding scarlatinal affection, eighty per cent. of the cases proving fatal. This complication is, in the majority of cases, true diphtheria. "It usually supervenes during the eruptive stage, often just 'when the rash is fading; sometimes it arises later. The symptoms of 'laryngeal obstruction develop with great rapidity, and are accompanied 'by a rise of temperature.'"<sup>3</sup> Paralysis of the intrinsic muscles of the larynx may occur as a result of measles.

#### RÖTHELN: GERMAN MEASLES.

In this disease there is frequently slight nasal catarrh, but not to be compared to what is met with in measles. A sore throat which resembles the early stage of the scarlatinal sore throat, is usually present; indeed, it was on this account that Rötheln was originally regarded as a hybrid between scarlet fever and measles, *i.e.*, it was said to have the sore throat of scarlet fever and the rash of measles. As a rule there is only a moderate amount of injection of the throat, with some swelling of the tonsils; there is hardly ever any ulceration, and never any sloughing.

#### SCARLET FEVER.

One of the most important of the recent advances in the treatment of infectious diseases is the attention directed in the condition of the

<sup>1</sup> "Cyclopædia of Medicine," Vol. IV., p. 201, English translation.

<sup>2</sup> "Diseases of the Throat and Nose," Vol. I., p. 190.

<sup>3</sup> "A Manual of Infectious Diseases," p. 174. Goodall and Washbourn.

nose and naso-pharynx. In no disease is this more necessary than in scarlet fever. In severe forms of this disease the nostrils and naso-pharynx may become affected by extension from the pharynx. The Eustachian tubes opening into the naso-pharynx participate in the inflammatory mischief, which spreading up the tubes gives rise to otitis media, and all the dangers to life and hearing therewith connected. At the commencement there may be noticed a catarrhal condition of the nasal mucous membrane, but the discharge rapidly becomes mucopurulent and very acrid, so that it excoriates the upper lip. In cases of a malignant type the mucous membrane may slough in places, and necrosis of bone and cartilage may result. In scarlet fever the streptococci of pus develop in great numbers in the mucous discharge; cervical adenitis and abscess, purulent otitis media, endocarditis, pleurisy, etc., are due to their absorption; hence the importance of local treatment.<sup>1</sup> In some cases epistaxis occurs at the commencement of the disease; when it occurs towards the end, or during convalescence, it is to be attributed rather to the kidney condition than to the fever. If a nasal discharge comes on during convalescence the secretion should be submitted to bacteriological examination, as post-scarlatinal diphtheria may attack the nasal passages primarily or exclusively. As in measles, the accessory sinuses, according to Wolff,<sup>2</sup> are always affected, the inflammation being sometimes of a catarrhal nature; in other cases suppuration may occur. I have already expressed my doubts as to the constant affection of the sinuses in measles, and I would repeat them again in respect to scarlet fever.

It is quite unnecessary for me in this assembly to enter upon a description of the condition of the throat in scarlet fever. In passing, however, I should like to direct your attention to a very important practical point which, I think, is often overlooked, resulting in the occurrence of preventable disease and death. I cannot do better than quote Dr. Dukes, the able physician to Rugby School: "There is a class of sore throats—to all appearance often only simple acute tonsillitis, while at others having a membranous or sloughy appearance, and with a complete absence of eruption on the skin—occurring in those who have already had scarlatina. This kind of sore throat, however, is capable of passing on scarlatina to an individual who has not already been affected by it. Scarlatina is often spread extensively by this means; for, if the patient has suffered previously from scarlatina, these sore throats are looked upon as simple non-infectious sore throats, and are consequently not carefully isolated for three or four days as they should be."<sup>3</sup> The occurrence of a membranous inflammation of the throat during the course of scarlet fever has attracted much attention of late years. It is now pretty generally agreed that a membrane may present itself at two periods of the disease<sup>4</sup>—(1) during the acute stage, *i.e.*, during the period of eruption; (2) during convalescence or even later. 1.

<sup>1</sup> "Archives of Pediatrics," Jan. 2nd, 1894.

<sup>2</sup> "Centralblatt für Laryngologie," Vol. XI., p. 961.

<sup>3</sup> "Health at School," p. 292.

<sup>4</sup> "Transactions of the Clinical Society," Vol. XXVII., p. 84.

The membrane which occurs in the first period, though it may be whitish grey, thick and adherent, and to the naked eye hardly at all to be distinguished from a true diphtheritic membrane, is proved by bacteriological examination to be due to streptococci, and not to contain the Klebs-Löffler bacillus. It may also be distinguished clinically from diphtheria by not spreading to the larynx, and by not recurring locally. Dr. Sidney Martin<sup>1</sup> suggests that the throat already attacked by scarlet fever poison is rendered less capable of resisting the invasion of other organisms. 2. The membrane met with in the second period contains the Klebs-Löffler bacillus, and as this is accompanied by the presence of streptococci the disease represents a very grave combination. It is, of course, possible that diphtheria may occur as a complication of scarlet fever during the early stage, but this is, according to Dr. Washbourn,<sup>2</sup> a very rare mishap; the only way of arriving at a correct diagnosis is a bacteriological examination. As regards the method of infection, Dr. Goodall<sup>3</sup> is of opinion that the introduction of diphtheria into the Asylums Board's fever hospitals is generally due to infection from mild cases of that disease inadvertently admitted as scarlet fever. Laryngeal mischief in connection with scarlet fever apart from diphtheria is rare. Dr. Washbourn,<sup>4</sup> however, states that he has seen cases of ulceration of the larynx in scarlet fever unaccompanied by membranous exudation.

#### WHOOPING COUGH.

Whooping cough almost invariably begins with a catarrhal stage, the nasal mucous membrane sharing in the catarrhal condition. During the paroxysmal stage epistaxis is a common symptom, and so far from being a grave one it often seems to relieve the patient. There is a difference of opinion as to whether there are any constant changes to be seen in the larynx during life. Von Herf,<sup>5</sup> while suffering from an attack, made a series of examinations upon his own larynx. He noted in the first stage a slight catarrh of the larynx, which became very intense during the spasmodic stage; the vocal cords, however, were not affected. The hyperæmia extended into the trachea. During every paroxysm a pellet of mucus could be seen on the posterior wall of the larynx on a level with the glottis; when this was expelled the attack ceased.

#### INFLUENZA.

Influenza is essentially a catarrhal disease—that is to say, the micro-organism, almost certainly that described by Pfeiffer, seems to attack the mucous membrane in the first instance; in some cases its effects are almost confined to them, and in nearly every case they experience the chief brunt of the disease. Very curiously, Langdraff<sup>6</sup> states that he has seen rhinitis only once in 216 cases of influenza. He adds that this is the more surprising as in text-books it is reckoned as one of the most common symptoms of influenza. The only explanation that seems forth-

<sup>1</sup> "The Lancet," Jan. 20th, 1894, p. 151.

<sup>3</sup> "The Lancet," Mar. 14th, 1896, p. 710.

<sup>5</sup> "Medical Record," March 5th, 1887.

<sup>2</sup> "Brit. Med. Journ.," 1894, Vol. I., p. 130.

<sup>4</sup> "The Lancet," Jan. 20th, 1894, p. 151.

<sup>6</sup> "Revue de Laryngologie," 1890, p. 499.

coming is that Langdraf would not class a catarrhal state of the nose as rhinitis, but reserves the latter for severe inflammatory condition of the nose. The nose, as being the chief portal of the entrance of the specific bacillus, which is taken in with the inspired air, is early affected, and the excessive sneezing, marked interference with nasal respiration, and profuse running from the nose testify to the violence of the attack. In many cases the acuteness of the catarrh causes a certain amount of hæmorrhage from the nose. Occasionally this has been of an alarming nature, the bleeding occurring from the posterior third of the nasal cavity; in some cases, indeed, a special hæmorrhagic tendency seems to have developed during the course of the disease. A frequent sequel of the rhinitis of influenza is some alteration in the sense of smell. Usually it takes the form of simple loss of the sense of smell—anosmia. More rarely the anosmia is accompanied by perverted olfactory sensations—parosmia. I have met with all degrees of anosmia, from slight impairment of the sense of smell to its complete loss. As a matter of course the loss of the sensation of smell was accompanied by loss of so much of the sense of taste as depends on flavour. I have no note as to the loss of gustatory sensations.

The accessory cavities of the nose are very liable to be affected in influenza, the intense frontal headache being due in many cases to extension of the catarrhal process from the nose to the frontal sinuses. Dr. Felix Semon<sup>1</sup> has narrated his personal experience of acute inflammation of the left antrum of Highmore after influenza, and many similar cases have been recorded. Cases of antral disease coming on in this acute manner respond much more quickly to treatment than those developing more gradually. In many cases the influenzal attack begins with symptoms referred to the naso-pharyngeal space, and it appears to be the starting-point of a large number of local affections coming on during influenza, notably otitis media and its results, and it may be the centre of the systemic infection. The patient complains of severe headache extending to the back, difficulty in breathing through the nose, and the sensation of a foreign body, variously referred to the nose or throat, so that the patient is constantly hawking or trying to clear the throat. On making a rhinoscopic examination the mucous membrane of the naso-pharynx will be found much swollen, and covered in places with a viscid secretion; in exceptional cases I have seen follicular inflammation of the pharyngeal tonsil. Shelley<sup>2</sup> has called attention to the existence of a vesicular eruption on the palate as a sign of influenza. Acute pharyngeal catarrh is a very common condition in influenza; the mucous membrane is of a purplish colour and œdematous, and in consequence of the swelling and the muscular infiltration pain and difficulty in swallowing usually exist. The faucial tonsils, like the pharyngeal, may be the seat of follicular inflammation with or without peritonsillar mischief; they may be covered with a pultaceous exudation. Occasionally the inflammatory mischief runs a very severe course. In one patient I saw in consultation with Dr. Penny the condition was that of a phlegmonous pharyngitis, as there was great swelling of the pharynx

<sup>1</sup> "Brit. Med. Journ.," Vol. I., pp. 237, 408, 574, and 681.

<sup>2</sup> *Ibid.*, 1893, Vol. I., p. 791.

followed by suppuration, and the urine contained much albumen. This patient recovered. In two other cases a membranous exudation formed on the soft palate. It resembled in some respects a diphtheritic membrane, but unfortunately in neither case was a bacteriological examination made. In both patients the urine was albuminous. Both these patients died.

One of the most common of the complications of influenza is laryngitis of all degrees of severity. In the mildest cases the larynx is seen to be the seat of a slight catarrh, the symptoms being a troublesome, irritable cough, difficult to cure, with hoarseness or even loss of voice. In more severe cases the vocal cords are intensely injected, the sputa may be tinged with blood, and occasionally the expectoration of blood has been so profuse as to warrant the term of "hæmorrhagic laryngitis" being applied. The presence of dysphagia is said to differentiate the hæmorrhagic laryngitis of influenza from the ordinary forms of hæmorrhagic laryngitis. This statement requires confirmation.<sup>1</sup> Several authorities have noted infra-glottic swelling in cases of influenzal laryngitis. Fraenkel<sup>2</sup> regards as characteristic of this disease a fibrinous infiltration of the vocal cords, giving a whitish appearance in places to the cord. This is followed by a superficial loss of epithelium. Ulceration of the vocal cords, apart from any fibrinous exudation, has been described in influenza. The ulcers are quite superficial, occur in the anterior part of the cords, and usually heal rapidly. In severe cases swelling of the aryepiglottic folds, occasionally amounting to œdema of the larynx, has been noted. Abscess of the larynx has been met with as a complication of influenza. Schaeffer<sup>3</sup> records a case in which abscesses developed in three different parts of the larynx. Tracheotomy was required on account of dyspnœa; the canula was able to be removed after eight days, and the patient made a good recovery.

The most common paralytic affection of the muscles of the larynx met with in influenza is paralysis of the adductors and tensors of the cords, giving rise to loss of voice. Lublinski<sup>4</sup> has recorded one case of paralysis of the posterior crico-arytenoid on the left side which recovered in the fourth week, and I have seen bilateral adductor paralysis follow a severe attack of influenza. Kuttner<sup>5</sup> showed at the Berlin Laryngological Society a woman, fifty-four years of age, who had, during an attack of influenza, paresis of the soft palate and muscles of the posterior wall of the pharynx on the left side and paralysis of the corresponding cord. He regarded it as a case of recurrent paralysis of neuritic origin.

#### ENTERIC FEVER.

In enteric fever there is a tendency to a catarrhal state of the mucous membranes, and the pituitary membrane suffers with the others. Two symptoms met with in enteric fever are due to the catarrh of the nose, viz., the deafness which results from extension of the catarrhal process

<sup>1</sup> "Revue de Laryngologie," 1890, p. 613.

<sup>2</sup> "Centralblatt für Laryngologie," Vol. VII., p. 38.

<sup>3</sup> "Deutsche Medicinische Wochenschrift," 1890, No. 10.

<sup>4</sup> "Centralblatt für Laryngologie," Vol. XII., p. 136.

<sup>5</sup> *Ibid.*, Vol. XII., p. 135.

to the Eustachian tubes and their consequent occlusion, and epistaxis. Epistaxis is so common a symptom at the commencement of enteric fever that, given a young adult who is feverish and has had an attack of nose bleeding, the possibility of enteric fever should be borne in mind. Epistaxis is most frequent in the first week of typhoid fever, on the second or third day. As a rule it is of no prognostic significance, but occasionally the loss of blood has been so excessive as to destroy life. Devic<sup>1</sup> states that buccal ulceration is fairly common in enteric fever. The ulceration is always superficial, oval or round in shape, with regular and not undermined margins. It occurs most frequently on the anterior pillars of the fauces. At the commencement of enteric fever there may be some erythema of the pharynx and enlargement of the tonsils, but there is nothing characteristic. Dr. Gee<sup>2</sup> says: "Sore throat attends the first few days of typhoid fever with a frequency which is remarkable. Hereby for a time perplexities in diagnosis may occur." He regards it as a necessary part of the febrile state rather than a symptom of the specific fever. Ulceration of the pharynx has been noted in exceptional cases. According to Morell Mackenzie<sup>3</sup> an herpetic eruption is occasionally seen on the mucous membrane of the pharynx and mouth, accompanied by pain in deglutition. As in the other acute specific diseases, a secondary diphtheritic deposit may occur on the fauces of patients suffering from typhoid fever. It usually occurs during the third week, and is a serious and fatal, but fortunately rare, complication. Out of six cases mentioned by Oulmont five terminated in death, and Peter states that it has been fatal in all the instances he has met with.<sup>4</sup>

Clinically, the laryngeal changes in typhoid fever may be considered according as to whether they occur as a complication of the fever, or whether the symptoms they present are so severe as to mask the underlying disease. Of the first variety, laryngitis is the representative; a mild form, characterized by slight injection of the larynx and increased cell proliferation, is fairly common in the second and third weeks of the disease. Landgraf<sup>5</sup> has several times seen yellow patches in the larynx formed by colonies of staphylococcus pyogenes. A more severe form may occur acutely during the third week of the fever, or it may show itself in a chronic form during convalescence. During the first two weeks of typhoid fever there is often reason to suspect a catarrhal condition of the larynx from the patient's voice and the signs of catarrh of throat and chest, but it is usually not until the third week that the severe symptoms present themselves. These are hoarseness and feebleness of voice, dyspnœa (chiefly affecting inspiration, expiration being easy), and pain and difficulty in swallowing. Laryngoscopic examination is naturally difficult in patients in the third or fourth week of typhoid fever; but, if practicable, swelling of the arytenoids and of the aryepiglottic folds and some ulceration are the conditions most likely to be recognized. Tracheotomy is generally

<sup>1</sup> "Brit. Med. Journ.," 1896, Vol. I., epitome 213. See also Vourviller, "Centralblatt für Laryngologie," Vol. VII., p. 13.

<sup>2</sup> "St. Bartholomew's Hospital Reports," Vol. X., p. 12.

<sup>3</sup> "Diseases of the Throat and Nose," Vol. I., p. 192.

<sup>4</sup> Morell Mackenzie, *op. cit.*, p. 193.

<sup>5</sup> "Berliner Klinische Wochenschrift," 1889, No. 14.

necessary on account of the increasing dyspnoea. Death may be due to a laryngeal ulcer spreading down into the connective tissue and giving rise to subcutaneous emphysema. Fagge and Pye-Smith mention cases of this sort recorded by Wilks and Ziemssen. The chronic variety most frequently occurs during convalescence, or it may not be noticed until recovery is apparently complete. The patient presents the usual signs of laryngeal stenosis; sudden death may be caused by cedema of the larynx or impaction of a portion of necrosed cartilage in the glottis. If the urgency of the dyspnoea necessitates tracheotomy the canula has generally to be worn permanently, as destruction of the cartilage leads to collapse of the larynx. Even if recovery takes place without tracheotomy, trouble in connection with the voice and breathing may result from the cicatrization of the ulcerated parts.

I now propose to describe another class of cases to which the name of laryngo-typhoid has been applied, in which the poison of typhoid fever is at the onset focussed, as it were, upon the larynx, so that the symptoms of the local affection may, up to the end of the first week, so completely mask the underlying febrile state that it is not until the appearance of the eruption and other characteristic symptoms of typhoid fever that the diagnosis can be made with any degree of certainty. A typical case is one recorded by Gerhardt.<sup>1</sup>

A series of five cases reported by Dr. Watson Williams<sup>2</sup> is important, as pointing to the possibility of typhoid fever being communicated by the breath. This method of communication is, of course, most likely to occur in cases of laryngo-typhoid; hence special prophylactic precautions should be taken in these cases. Patients with any previous tendency to laryngeal affections seem to be more vulnerable to this form of typhoid fever than others; this was the case in Gerhardt's patient, and also in Dr. Watson Williams's first patient.

(Edema of the larynx may occur as a result of any of the laryngeal complications of typhoid fever; it has been the cause of death in a case of ambulatory typhoid fever, without any previous symptoms of throat mischief.<sup>3</sup> Paralysis of the vocal cords is occasionally seen as the result of enteric fever. Lublinski,<sup>4</sup> for example, has seen five cases—four in men and one in a woman—all occurring between the ages of twenty-seven and thirty-nine years. In one case there was bilateral abductor paralysis, in three paralysis of one recurrent nerve, and in one paralysis of both recurrent nerves. The paralysis may be due to pressure on the recurrent nerve by enlarged glands or thickened pleura; or, inasmuch as it is sometimes accompanied by paraplegia or paralysis of peripheral nerves, we must assume the existence of an anterior polio-myelitis or a peripheral neuritis due to toxins. The symptoms usually show themselves during defervescence. Of the five cases recorded by Lublinski, one case, that of bilateral recurrent paralysis, died three days after the onset of the paralysis. In the case of bilateral posticus paralysis tracheotomy had

<sup>1</sup> "Archives of Laryngology," Vol. I., p. 121.

<sup>2</sup> "Brit. Med. Journ.," 1894, Vol. II., p. 1353.

<sup>3</sup> "Centralblatt für Laryngologie," Vol. XI., p. 34.

<sup>4</sup> *Ibid.*, Vol. XII., p. 136.

to be performed. The diagnosis in these cases is only to be made by means of the laryngeal mirror, and care must be taken to exclude cases of fixation of the vocal cord due to ankylosis of the crico-arytenoid joint.

The most recent account of the pathology of the laryngeal complications of typhoid fever is that contained in the paper written by Dr. Kanthack and Dr. Drysdale, and the discussion thereon at the Laryngological Society of London on February 12th, 1896. The paper was based on the *post-mortem* records of sixty-one cases. In fourteen there was loss of substance in the larynx, and in eight it was stated in the *post-mortem* books that the larynx had not been examined; so that, assuming that the larynx had been examined in all the remaining fifty-three cases, which is doubtful, ulceration was found in 26 per cent. of the fatal cases. This represents a great advance in numbers affected compared with Hoffmann's figures, as quoted by Fagge and Pye-Smith;<sup>1</sup> he gives only twenty-eight cases of ulceration in two hundred and fifty necropsies, *i.e.*, a percentage of eleven as against twenty-six. Various explanations have been given as to the pathological nature of these lesions. Dittrich assumed that they were of decubital origin; the evidence on this point is conflicting. Rokitsky pronounced in favour of the typhogenetic nature of the ulceration; but clinical evidence, and the results of recent bacteriological examination, tell rather against this theory. I am myself inclined to agree with Dr. Kanthack and Dr. Drysdale in their summary of the question: "The evidence in their possession convinces them that these "laryngeal ulcers occurring during the course of typhoid fever are "caused by fresh infections with pyogenic organisms which always "abound in the larynx, and which gain a firm foothold on the debilitated "tissues; although they cannot deny in an individual case the typhoid "bacillus may have escaped and caused the lesion."

Dr. Jobson Horne made an important remark during the discussion, to the effect that in some of the larynges of persons dying from typhoid fever the ulceration had been proved by microscopical examination to be of a tuberculous nature. From this he deduced two conclusions: (1) that typhoid fever may be a possible factor in the etiology of tuberculous ulceration of the larynx; and (2) that the tuberculous diathesis may be a factor in the etiology of typhoid ulceration of the larynx. One of the most characteristic features of the typhoid affection of the larynx is the tendency to suppuration about the cartilages leading to their necrosis and extrusion, and the tendency to destructive changes in and about the crico-arytenoid joints, so that if the patient recovers he does so with an immobile joint, and consequently fixed cord. Lacoarret,<sup>2</sup> in an excellent article on arthritis of the crico-arytenoid joint, has collected many examples of this condition occurring as a result of enteric fever.

#### ERYSIPELAS.

In the production of facial erysipelas chronic nasal affections play an important rôle; hence the frequency with which erysipelas starts from the centre of the face, the orifice of the nostril being a favourite point of

<sup>1</sup> "Principles and Practice of Medicine," Third Edition, Vol. I., p. 158.

<sup>2</sup> "Revue de Laryngologie, d'Otologie, et de Rhinologie," 1891, p. 399.

departure. A large amount of literature has accumulated on the subject of erysipelas of the pharynx and larynx, but our ideas on this subject have been clarified since we recognized the streptococcus erysipelatis as the cause of erysipelas. If, as seems likely to be the case, the streptococcus pyogenes—the cause of various septic affections such as phlegmonous erysipelas—is proved to be identical with the streptococcus erysipelatis, the whole subject of erysipelas of the throat will be much simplified. I am strongly in favour of the view propounded by Dr. Semon, that erysipelas, phlegmonous pharyngitis, angina Ludovici, and similar conditions are only modifications of the same process, differing in their virulence or place of development. I have discussed the subject of erysipelas of the pharynx and larynx in a paper presented at the meeting of the British Medical Association in 1891,<sup>1</sup> so that it is unnecessary for me to say more on the subject on the present occasion.

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## ABSTRACTS.

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### DIPHTHERIA, &C.

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**Cuno, M.** (Frankfort).—*Two Years' Diphtheria Serumtherapy.* "Deutsche Med. Woch.," 1896, No. 52.

OF 483 cases of diphtheria, 282 were grave, 112 moderate, 89 light cases. The mortality was 51 (equal to 10·5 per cent.); or if the moribund and those with other diseases are excepted, 34 (equal to 7 per cent.). From 1889 to 1894, the mortality was 32 (equal to 43·8 per cent.); 125 cases had laryngeal stenosis; of these, in 71 cases the stenosis disappeared under the use of serum. Of 51 tracheotomies, 17 (equal to 31·5 per cent.) died. In 76 cases cardiac weakness was observed, and in 60 cases paralysis.

*Michael.*

**Hammer** (Heidelberg).—*Further Experiences in the Treatment of Diphtheria with Behring's Heilserum.* "Deutsche Med. Woch.," 1896, No. 51.

OF 112 cases, in 87 Loeffler's bacilli were found, 17 died, 60 per cent. The author recommends this treatment. The paper is a paradigm of the manner in which the statistics are treated to prove the advantage of serum treatment. Without serum the mortality decreased since 1891, 67 per cent.; 1892, 50 per cent.; 1893, 52 per cent.; 1894, 41 per cent.; 1894 (second half), 1895, with serum, 25 per cent.; 1896, with serum, 17 per cent. These numbers, which only prove that since 1891 the mortality has decreased, without and with serum, are used to prove the efficacy of this treatment. But of the mortality of those who are injected the first days of the disease, 12 of 52, 23 per cent., and 3 of 27 injected later, 11 per cent., the author says that the numbers are too little for any conclusion.

*Michael.*

*The Quality of Antitoxin used in America.* "Med. News," Dec. 19, 1896.

THIS is the result of an inquiry the "Medical News" made into the strength of the antitoxin used in the principal cities throughout America.

<sup>1</sup> "Brit. Med. Journ.," 1892, Vol. I., p. 434.

TABLE I.—SHOWS THE RESULT OF THE EXAMINATION OF NINETEEN SAMPLES

| Serum number. | Times tested. | Immunizing units per c.cm. | Number of c.cm. of serum in original flask. | Total number of immunizing units in each flask. |
|---------------|---------------|----------------------------|---|---|
| 1.....        | 12            | 350                        | 10  | 3500  |
| 2.....        | 14            | 350                        | 9.9   | 3465  |
| 3.....        | 6             | 150                        | 11.2  | 1680  |
| 4.....        | 10            | 250 <sup>1</sup>           | 2.8   | 700. <sup>1</sup>                               |
| 5.....        | 6             | 70                         | 9.25  | 647.5   |
| 6.....        | 6             | 150                        | 9.2   | 1380  |
| 7.....        | 14            | 350                        | 18.4  | 6440  |
| 8.....        | 6             | 150                        | 4.2   | 630   |
| 9.....        | 7             | 50                         | 3.55  | 177.5   |
| 10.....       | 5             | 100                        | 9.7   | 970   |
| 11.....       | 7             | Less than 20               | 3.6   | Less than 72                                    |
| 12.....       | 4             | 100                        | 9.7   | 970   |
| 13.....       | 7             | 100                        | 3.45  | 345   |
| 14.....       | 13            | 350                        | 9.1   | 3185  |
| 15.....       | 8             | Less than 50               | 8.2   | Less than 410                                   |
| 16.....       | 8             | 70                         | 9   | 630   |
| 17.....       | 4             | 100                        | 9.7   | 970   |
| 18.....       | 4             | 100                        | 9.1   | 910   |
| 19.....       | 10            | 200                        | 9.3   | 1860  |

<sup>1</sup> The serum in flask No. 4 was exhausted before this test could be carried higher.

TABLE II.—THE ADVERTISED STRENGTH AS SHOWN ON THE LABELS.

| Serum number. | Immunizing units per c.cm. claimed. | Number of c.cm. of serum in original flask. Claimed. | Total number of immunizing units in each flask. Claimed. |
|---------------|-------------------------------------|--|--|
| 1.....        | 50                                  | Not stated   | Not stated   |
| 2.....        | 150                                 | 10   | 1500   |
| 3.....        | Not stated                          | Not stated   | 1500   |
| 4.....        | Not stated                          | Not stated   | 1500   |
| 5.....        | 100                                 | 10   | 1000   |
| 6.....        | 100                                 | 10   | 1000   |
| 7.....        | "Dose 5 to 30 c.cm."                | 20   | Not stated   |
| 8.....        | "Dose 5 to 20 c.cm."                | 5  | Not stated   |
| 9.....        | Not stated                          | Not stated   | 1000   |
| 10.....       | Not stated                          | 10   | Not stated   |
| 11.....       | Not stated                          | Not stated   | 1000   |
| 12.....       | Not stated                          | 10   | Not stated   |
| 13.....       | 100                                 | 5  | 500  |
| 14.....       | Not stated                          | Not stated   | 600  |
| 15.....       | Not stated                          | Not stated   | 1500   |
| 16.....       | 20 "estimated"                      | 10   | 200  |
| 17.....       | 100                                 | 10   | 1000   |
| 18.....       | 100 +                               | 10   | 1000 +   |
| 19.....       | 100                                 | 10   | 1000   |

The editor notes that samples of the same manufacturer purchased in different markets showed a wide variation. He believes that this is due partly to a deterioration by keeping and partly to the preservatives used having a weakening effect on the antitoxin.

*StGeorge Reid.*

**Marcuse** (Berlin).—*Contribution to Diphtheria Statistics.* Inaugural Dissertation. Berlin, 1896.

STATISTICAL review of the diphtheria epidemics in Prussia from the year 1875 to 1894. Excepting some of the last years, the number of cases increased from year to year. The mortality differed between twenty-two per cent. and thirty-three per cent. *Michael.*

**Muller** (Berlin).—*Experiments on the Presence of Diphtheria Bacilli in the Mouths of Children in a Large Hospital not affected with Diphtheria.* "Jahr. für Kinder.," Band 43, Heft 1.

OF one hundred children without any symptoms of diphtheria, Loeffler's bacilli were found in the buccal cavities of twenty-seven. In six cases examinations made the first day they were in the hospital gave positive results. Five of these children came of families in which no case of diphtheria had been observed during the last few years. In the sixth child's family a case of diphtheria had occurred, but the child itself was not affected. The cultures of the bacilli in the observed cases were virulent. These cases prove that the diphtheria bacilli cannot produce the disease if a personal immunity exists. *Michael.*

**Turner, A. J., and Ashworth, L. N.**—*The Value of Antitoxin in the Treatment of Diphtheria.* "Intercolonial Med. Journ.," Oct. 20, 1896.

THIS article is based on observations at the Brisbane Children's Hospital. The protective influence of the serum was proved by the fact that non-diphtheritic cases injected as a prophylactic measure, and who occupied the same wards as virulent diphtheria cases, invariably escaped. The writers point out the not sufficiently appreciated fact that improved methods of diagnosis should show, other things being equal, an increased mortality, and that any lowering of this ratio derives consequently an increased significance. The following tables are given:—

|                                |                      |                              |
|--------------------------------|----------------------|------------------------------|
| July, 1889, to June, 1891..... | 73 cases, 34 deaths. | } Treated without antitoxin. |
| „ 1891, „ „ 1893.....          | 114 „ 47 „           |                              |
| „ 1893, „ Jan. 1895.....       | 116 „ 46 „           |                              |
| 303 „ 127, or 41·9 per cent.   |                      |                              |

Jan., 1895, „ Sept., 1896..... 83 „ 15, or 18·1 „, with serum treatment.

As an explanation of the high mortality of the especially earlier figures, it must be borne in mind that the cases admitted most frequently required operation, as is shown below:—

|                                |   |
|--------------------------------|---|
| July, 1889, to Jan., 1895..... | 166 operations, 104 deaths, or 62·7 per cent. |
| Jan., 1895, „ Sept., 1896      | } 37 „ 13 „ „ 35·1 „                          |
| (in verified cases)            |   |

The authors state further that there was no difference in the character of the disease.

The percentage mortality under the antitoxin treatment is divided into two classes, viz.:—

|                    |                      |
|--------------------|----------------------|
| First period ..... | 40 cases, 10 deaths. |
| Second „ .....     | 43 „ 5 „             |

The mortality in cases treated during the first four days was practically similar in both, the marked change being in the advanced cases of long duration, which is attributed to the much larger doses of the serum used during the second period. Since the introduction of the antitoxin treatment no cases have developed laryngeal symptoms, and of those admitted with such symptoms the mortality has been reduced to one-seventh of that which previously obtained. The object aimed at has been to inject a sufficient quantity of serum within twenty-four hours to inhibit the

further progress of the disease: in severe cases up to four thousand units (four bottles of Behring's No. 11) within that space of time, in two doses—the first on admission. The antitoxin of the British Institute of Preventative Medicine appears not to have been constant in strength, and so no stated dose is given. All cases cannot be saved even by antitoxin. In the recovered cases convalescence is short and satisfactory. Only two cases of paralysis have been noted since the increased dose has been used. And no toxic effects, with the exception of the "serum rash," were noticed. The authors, after summing up in a most judicial manner, give the preference to Behring's serum. *R. Lake.*

**Turner, A. J.**—*A Few Notes on the Bacteriological Diagnosis of Diphtheria, and on the Disappearance of the Bacilli during Convalescence.* "Intercolonial Med. Journ. of Australasia," Nov. 20, 1896.

THE cultures were made in Petri dishes and on glycerine-peptone-agar. There is no objection to using a piece of membrane kept for several days, as is shown by the following table:—

|               |         |                    |                  |
|---------------|---------|--------------------|------------------|
| Membrane kept | 7 days, | diphtheria bacilli | numerous.        |
| "             | " 24 "  | " "                | " still present. |
| "             | " 54 "  | " "                | " not found.     |
| "             | " 57 "  | " "                | " still "        |
| "             | " 61 "  | " "                | " not "          |
| "             | " 89 "  | " "                | " " "            |
| "             | " 101 " | " "                | " " "            |
| Swabbing kept | 13 "    | " "                | " numerous.      |
| "             | " 39 "  | " "                | " a few present. |

The various difficulties in culture and diagnosis are gone into, and hints given as to how to avoid failure. As to disappearance of the bacilli during convalescence, in all thirty-four cases were examined, twenty-eight giving negative results from sixteen to twenty-four days after admission, two negative results on the nineteenth and twenty-seventh days, and four on and up to the thirty-seventh day, the twenty-sixth day being the latest date after admission on which they were found. *R. Lake.*

**Varnali.**—*A Case of Scarlatina, with Diphtheria without Fever.* "Archiv. für Kinderheilk.," 1897, Vol. XXI., p. 358.

A. B., a strong, well-developed boy of three and a half years, took a slight attack of scarlatina on May 21st, 1893. On the 23rd a diphtheritic patch was found on the left tonsil, with swelling of left sub-maxillary and cervical lymphatic glands. The child was drowsy, had no appetite, but the temperature remained normal. The pseudo-membrane spread over the palate, uvula, and pharynx, and a lemon-coloured irritating fluid flowed from the nose; still no fever, and child quite bright and playing about the room. For some time the child coughed up pieces of membrane; the voice, for a little, was rough; and later on the urine contained albumen and red blood corpuscles. Only once did the temperature rise above normal (viz., to 38° C.), and it immediately sank again after a small dose of calomel. *A.J. Hutchison.*

## MOUTH, &c.

**Colin.**—*Treatment of Leptothrix Mycosis with Perchloride of Iron.* "Arch. Int. Laryng., Otol., et Rhin.," Tome IX., No. 5.

AFTER treating a well-marked case of mycosis of the tonsils, tongue, etc., by his ordinary method (application of iodine after evulsion of the fungus) without success,

the author employed the following method:—The prominent end of each growth was touched with the officinal solution of perchloride of iron (twenty-six in seventy-four, water). The fungus stained yellow immediately, and was found, in two days' time, to be black and hard. Each mass was then easily pulled out of its crypt and was found stained throughout. The process was repeated every other day for three weeks, and the mycosis, at the end of that time, was entirely eradicated.

*Ernest Waggett.*

**Fede, Francesco.**—*Riga's or Urban Cardarelli's Disease.* "Arch. für Kinderheilk.," 1897, Vol. XXI., p. 351.

THIS is a disease often seen in children in Lower Italy, especially in the province of Sannio. A raised, grey, pearl-like swelling is found on the under surface of the tongue and on the frenum. It is evidently due to friction against the inferior first incisor teeth, because it generally occurs shortly after the eruption of these teeth. At first it is of the nature of a papilloma, but later on the superficial layers begin to ulcerate, and a free infiltration of small cells and fibrine takes place, so that the growth takes on the nature of a granuloma.

Fede describes three types of the disease. In the first the growth on the tongue is the only disease, the children being otherwise healthy; in the second, owing to disorders of stomach or intestine, or to tuberculosis, the children become thin and cachectic, and the local condition takes on a much more serious character and shows no tendency to heal; in the third the affection begins as a severe illness, which may even cause death. In all three types, however, the local growth is the same, and the general symptoms accompanying it are due to some other disease.

In the simple cases the growth should be excised and the part cauterized with nitrate of silver. In the complicated cases the general disease must also be suitably treated.

*A. J. Hutchison.*

**Griner.**—*A Case of Acquired Perforation of the Anterior Pillar.* "Ann. des Mal. de l'Or., du Lar.," etc., Feb., 1897.

THE interest of the case lies in the result of microscopic examination. The patient was a man of twenty-two, unaware of any abnormality of the throat. He remembered the occurrence of some throat trouble in early childhood, for which the cautery was used. An extensive perforation was to be seen in the left anterior pillar, and careful examination of the borders of the opening showed them to differ in appearance. On the outer side it was bounded by a whitish cicatricial band, but the internal free portion of the pillar seemed to consist of a fold of normal mucous membrane, thin, transparent, and non-adherent to the underlying tonsil. Examination of sections with the microscope proved this appearance to be deceptive. A band of cicatricial tissue was present, and the distorted epithelium corroborated the history of the cautery. The author therefore suggests that we are not justified in ascribing unilateral cases of this description to congenital malformation, relying upon naked-eye appearances alone.

*Ernest Waggett.*

**Turner, J. G.**—*Antral Suppuration following Invasion by a Dental Cyst.* "Clin. Journ.," Oct. 14, 1896.

ON examining the mouth a bony swelling was found, yielding but not crackling on pressure, extending from the canine eminence to the last molar of the right upper maxilla. Purulent discharge from right nostril. At the outset of the trouble, two carious teeth, the pulps of which were dead, had been extracted to relieve pain, but unsuccessfully, though pus was said to have escaped from their sockets. On removing the outer wall of the cyst, the floor of the antrum was found to have been absorbed, and the inner wall of the antrum to have almost wholly disappeared.

*Middlemass Hunt.*

## ŒSOPHAGUS.

**Bowes, C. Kessick** (Herne Bay).—*Congenital Obliteration of the Œsophagus, with other Malformations.* "Brit. Med. Journ.," March 13, 1897.

THE child, who had absence of both radii and thumbs, as well as excessive flexion of both hands, was noticed to be unable to swallow the milk it obtained from the breast, which returned through the nose. The child wasted, and finally died on the thirteenth day. *Post mortem*: The œsophagus terminated at a level three-quarters of an inch below the larynx, and the lower part, as it came up from the stomach, opened into the trachea near its bifurcation. R. Lake.

## NOSE, &c.

**Gellé, Georges.**—*Peroxide of Hydrogen: its Rôle as a Hæmostatic and Antiseptic.*

"Arch. Int. de Lar., Otol., et Rhin.," Tome IX., No. 5.

PEROXIDE of hydrogen gives rise to two characteristic types of reaction: (1) reaction by which it oxidizes other bodies; (2) reaction by which bodies in contact with it lose their oxygen at the same time as does the re-agent. It is to this second type that the physiological properties of the drug are due. Its antiseptic qualities are well known, and in this connection it need only be said that peroxide of hydrogen is not toxic, and that a considerable quantity may be injected intravenously without ill result. A very large dose will cause respiratory embarrassment, and even death, due probably to the decomposition of hæmoglobin. It may be employed with impunity even in the case of children. The hæmostatic action of the fluid is very marked and rapid. If a small quantity be mixed with blood, under the microscope, and the specimen observed as soon as ebullition has ceased, rapid formation of fibrin is seen, while red corpuscles run into rouleaux and lose their colour. The following experiments were made on rabbits:—(1) Transverse incision on the inner aspect of the auricle. Application of wool soaked in twelve per cent. solution. Immediate cessation of capillary hæmorrhage. The central artery continues to bleed. Extreme vaso-constriction, followed after some minutes by vaso-dilatation. (2) The fluid allowed to fall, drop by drop, on a similar wound. Six per cent. solution. Effect more marked than in previous experiment. (3) Twenty-two per cent. solution employed in the same manner, and with the same results. Pain experienced. (4) Twenty-two per cent. solution dropped into the eye. Pain produced. This, however, passed off in five minutes. Conjunctival injection. (5) Injection into the middle ear. Three centimètres of twelve per cent. solution. No evidence of pain. Normal, twenty-four hours after. The application produces, therefore, permanent capillary hæmostasis and a temporary arterial hæmostasis, the latter due to arterio-constriction.

The author has made careful analysis of a number of commercial samples, and arrives at the following conclusions:—(1) Neutral solution readily undergoes spontaneous decomposition. (2) Acidity is necessary for stability, but the amount of acid is of no importance. (3) Exposure to air for five days does not cause decomposition if dust is excluded by a wool plug. (4) Light does not cause decomposition, and coloured bottles are unnecessary.

The most useful solution is one very slightly acid, and containing ten to twelve volumes. The author has used these volumes on five hundred occasions in the

nose and ear, and has found no contra-indication. With regard to the methods of application in the nose, the author favours the employment of cotton-wool plugs saturated with the fluid. If the latter is poured into the nose, ebullition forces some of it through the lachrymal canal, and causes ocular pain. The spray will only serve where slight oozing of blood is to be staunched.

In intranasal operations, a fairly loose plug of wool, fully saturated, should be applied to the wound. After five minutes hæmorrhage will cease, and after clearing away the decolourized froth a clear field remains for further proceedings. The application is not absolutely painless, but in the large majority of cases amounts only to a passing sense of heat and pricking. In spontaneous epistaxis the drug may be used in the same manner, the plug not being allowed to remain more than twenty-four hours. On removal, even at the end of thirty-six hours, however, it will be found quite inodorous, and surrounded not with pus, but a thick coating resembling the white of an egg.

In aural surgery, the antiseptic action of the drug finds a use in the clearing of the meatus of discharge for purposes of observation; and in all cases of chronic otorrhœa it may be used without any misgivings as a preliminary to antiseptic douching. Its hæmostatic qualities especially indicate its use in removal of aural polypi.

The vaso-constrictor action facilitates manœuvres subsequent to incision of the membrane. When hæmorrhage follows incision, and the membrane becomes injected, the instillation of hydrogen peroxide will not only quickly arrest the bleeding and give a clear field to the operator, but also cause a blanching of the membrane.

For aural work the solution must be to some degree warm, and if the temperature is raised gradually no decomposition will occur. The drug is inexpensive.

*Ernest Waggett.*

**Gouguenheim.**—*Acute Abscess of the Septum.* ("Des Abscès Chauds de la Cloison Nasale.") "Ann. des Mal. de l'Or., de Lar.," etc., Jan., 1897.

THE author gives a complete survey of the subject of acute septal abscess, together with an account of seven cases. Though traumatic hæmatoma does not always lead to abscess, he believes that the cause of abscess is always trauma. Free opening and packing is the best treatment, and with this method of procedure cure is rapid, and free from risk of deformity through collapse of the septal cartilage.

*Ernest Waggett.*

**Helot** (Rouen).—*Electrolysis of Posterior Enlargement of the Inferior Turbinate.* ("De l'Electrolyse de Queues de Cornet.") "Arch. Inter. de Laryng., Otol., et Rhinol.," Tome IX., 2.

THE enlargements, usually bilateral, are to be treated simultaneously. A long, stiff, steel needle is made to transfix the hypertrophied tissue on either side, after cocaineization. The needles should not project into the naso-pharynx. The portions of the needles lying in the anterior part of the nasal fossæ are insulated with varnish, and are held in position by attachment to a spectacle frame. A current of from five to twelve milliampères is passed, ten to five minutes being required for the electrolysis, according to the strength of current used. At the termination of the sitting the current should be reversed (of course, reducing to zero and making gradual reversal) in order to free the positive needle.

The tissue is modified, not destroyed, and only a very small slough at the point of puncture, has to come away.

Two to four sittings are required according to the density of the tissue. The diffusion of the currents is said to make pain quite unnoticeable, and is even said to

have a beneficial influence on the ear and surrounding parts. With regard to pain in nasal electrolysis generally, this may be avoided by the use of a few large elements instead of a number of small ones; better still by the use of accumulators, or of a converter of the street supply. In a word, the desired intensity should be obtained with the smallest possible potential. *Ernest Waggett.*

Lubliner, L. — *Diseases of the Lachrymal Ducts due to Nasal Affections.* "Therap. Monats.," Dec., 1896.

THE author has examined the nasal condition in 94 cases of dacryocystitis chronica from the clinics of Kramsztyk and other oculists in Warsaw.

He gives the following table :—

|  |   |   |   |
|--|---|---|---|
| In 5 cases there was no nasal disease. |   |   |   |
| „ 34                                   | „ | „ | rhinitis hypertrophica.   |
| „ 30                                   | „ | „ | ozæna vera.   |
| „ 8                                    | „ | „ | rhinitis scrofulosa.  |
| „ 5                                    | „ | „ | rhinitis catarrhalis chronica.  |
| „ 5                                    | „ | „ | degeneratio polyposa conchæ inf. et med.,<br>polypi mucosi in meatu narium inf. |
| „ 3                                    | „ | „ | empyema antri Highmori.   |
| „ 2                                    | „ | „ | lues nasi, necrosis ossium.   |
| „ 1                                    | „ | „ | tuberculosis nasi.  |
| „ 1                                    | „ | „ | vegetationes adenoidæ.  |

Thus, of 94 cases, 89 had some nasal affection, whereas in only 5 was the nose healthy.

Compare this table with that of Kubli (St. Petersburg).

Two hundred and ten cases were examined.

|   |   |   |  |
|---|---|---|--|
| In 11 cases there was no nasal disease. |   |   |  |
| „ 174                                   | „ | „ | rhinitis and pharyngitis chronica (all kinds). |
| „ 18                                    | „ | „ | tertiary syphilitic affections.                |
| „ 1                                     | „ | „ | empyema antri Highmori.                        |
| „ 1                                     | „ | „ | trauma nasi.                                   |
| „ 2                                     | „ | „ | diphtheritis nasi.                             |
| „ 2                                     | „ | „ | variola.                                       |
| „ 1                                     | „ | „ | erysipelas.                                    |

Thus, of 210 cases, 199 had some nasal affection, whilst in only 11 was the nose healthy.

These diseases may be classified in two groups :—(1) Those which by producing pressure in the inferior meatus obstruct the orifice of the lachrymal duct and hinder or entirely prevent the entrance of tears into the nose—*e.g.*, hypertrophy of the inferior turbinal, new growths, and certain conditions of the antrum. (2) All pathological processes in the nasal mucous membrane which can spread *per continuitatem* to the mucous membrane of the tear duct—*e.g.*, ozæna, suppurations, rhinitis scrofulosa, etc., etc.

The results of treatment vary considerably. Where the condition is due to simple mechanical obstruction of the duct, as by polypus, etc., the removal of the polypus cures the disease; where hypertrophic rhinitis is present, treatment "has so far given satisfactory and encouraging results."

The least satisfactory cases are those in Group 2, of which the chief is ozæna. Even here, in a certain proportion of cases, the author has seen distinct improvement follow combined treatment, whereas treatment by the oculist alone, as a rule, is of no avail.

In connection with ozæna cases the author discusses the question whether the primary seat of the disease is in the lachrymal apparatus, as Nieden suggests, or in

the nose. Niden maintains that, given a chronic rhinitis, obstruction of the tear duct will convert the rhinitis into an ozæna. The author, on the other hand, is of opinion that the presence or absence of tears in the inferior meatus is of very little, if any, consequence to the function of the nose.

For purulent conditions, as in ozæna, thorough cleansing of the nose must be carried out, so that pus and crusts are not left in contact with or obstructing the orifice of the duct.

In summing up the author maintains that in every case of disease of the lachrymal apparatus the nose should be carefully examined, and that combined treatment by oculist and rhinologist will give a far larger proportion of desirable results than have hitherto been obtained by the oculist alone. *Arthur J. Hutchison.*

**Ripault.**—*A Case of Secondary Syphilis of the Nose.* "Ann. des Mal. de l'Or., Lar.," etc., Jan., 1897.

A MAN of thirty-five presented himself with total unilateral obstruction of one nostril of but four or five days' duration. The other nostril was healthy. Malaise and slight fever were present. Headache severe. The inferior turbinate was found to be in a state of acute inflammation and causing total obstruction of the passage. No ulceration was present, nor was any abnormality to be seen in the pharynx. At the end of fifteen days a typical syphilitic roseola appeared on the body, accompanied by mucous patches on the fauces. A primary lesion was not discovered, but a search for enlarged glands in the neck, etc., resulted negatively, and there was nothing to indicate the nose as the seat of infection. The condition was evidently a very early manifestation of secondary syphilis, and disappeared within three weeks of the commencement of mercurial treatment. *Ernest Waggett.*

**Shastid, T. H.**—*A Case of Temporary Amblyopia from Eucaine.* "The Journal," Feb. 13, 1897.

The writer, in a short letter, describes an instance of the toxic effect of eucaine, which goes to prove the error of forming an opinion of the usefulness and harmlessness of any drug on too few observations. In this case a five per cent. solution was used for the purpose of local anæsthesia of the turbinate. The patient, an adult of thirty-two, was suddenly seized with amblyopia, rapid pulse, and he seemed talkative and slightly incoherent. The former symptom lasted for several hours. *R. Lake.*

**Teichmann.**—*On Nasal Suppurations.* "Therap. Monats.," Dec., 1896.

THIS is a defence by Dr. Teichmann of his criticism ("Centralblatt für Chirurgie," 1896, No. 12) of the second edition of Grünwald's "Lehre v. d. Naseneiterungen," and does not require any special notice here. The following case, however, which is cited to introduce the subject, is interesting.

FrL. K. sang with a good round voice, but the three notes, e<sup>1</sup>, f<sup>1</sup>, g<sup>1</sup>, always were produced with a sharp, almost split, sound, and the voice was easily tired by singing them. Polypi had been found in and removed from the left nasal fossa, but with no improvement in the voice. When Dr. K. first saw her he found larynx quite normal, pharynx and naso-pharynx in a condition of chronic inflammation, and some thickening of the anterior ends of left, middle, and inferior turbinals—no secretion, no polypi. These conditions were treated without any effect. Patient was then sent to the country. On her return a small mucous polypus was found near the left hiatus semilunaris. It was removed, and was followed by a little pus. Diagnosis of empyema was at once made. The stump of the second left pre-molar tooth was then extracted, and thereby the antrum opened, and a lot of stinking pus discharged. The antrum was treated and cured, whereupon the voice troubles all disappeared. *Arthur I. Hutchison.*

**Vassant, Eugene Larrue.**—*A brief Report of the Results of a Bacteriological Investigation of the Nasal Mucus in One Hundred Cases of Chronic Nasal Discharge.* "Journ. Am. Med. Assoc.," Feb. 27, 1897.

OF the hundred cases examined the Klebs-Loeffler bacillus was found in twenty-six, eleven of which had atrophic rhinitis, three purulent rhinitis, five in simple rhinitis, three in nasal syphilis, and three in hypertrophic rhinitis. In fifty-eight cultures staphylococci were found. No cases were examined which showed any symptoms of diphtheria. His conclusions are that in a large percentage of chronic nasal catarrh the secretions are infected with diphtheria bacilli, staphylococci, etc.

Oscar Dodd.

## LARYNX.

**Brady, A. J. (Sydney).**—*Notes of a Case of Partial Laryngectomy for Epithelioma of One Vocal Cord.* "Australasian Med. Gaz.," Nov. 20, 1896.

IN this case there were no enlarged glands in the neck. Laryngoscopic examination showed a fungating growth involving the middle two-thirds of the right vocal cord. It was removed by dividing the thyroid cartilage, and removing the right half, with the right vocal cord and arytenoid cartilage, in one piece. The patient made a rapid recovery, and after six weeks the voice was fair and improving.

StGeorge Reid.

**Davidson, P.**—*Membranous Cast of Trachea and Bronchi.* "Brit. Med. Journ.," March 13, 1897.

THE author showed a membranous cast of the bronchial tubes, with numerous branches, coughed up by a child supposed to be suffering from diphtheria. Part of this examined microscopically was found to contain almost a pure cultivation of micrococci. No Loeffler's bacillus was discovered. Dr. Davidson, however, considered the case undoubted diphtheria. There was membrane on the tonsils and in the respiratory tract. Tracheotomy had been performed for dyspnoea. Diphtheria antitoxin had been injected. The patient was shown still wearing a tracheotomy tube. Dr. Davidson remarked that in several of the most marked cases of diphtheria he had seen, no Loeffler's bacillus had been found in the membrane examined.

Mr. BARK drew attention to the value of curetting the trachea and bronchi through the tracheotomy wound in cases of diphtheria, where dyspnoea recurred after the operation.

R. Lake.

**Gibb, Joseph (Philadelphia).**—*Eucaïne in Laryngology and Rhinology.* "Philadelphia Polyclinic," Jan. 23, 1897.

THE author treats of the relative value of eucaïne and cocaine in operations about the nose, throat, and larynx. After a number of carefully conducted experiments on the hypertrophied inferior turbinate, as to the difference in the contractile and hyperæmic action of these two drugs, he finds little difference, if any. After using them in a number of minor operations about the nose and throat, he sums up the evidence as follows:—

1. Eucaïne is equal to cocaine in its anæsthetic effects.
2. Eucaïne is nearly as effective as cocaine in reducing engorged turbinates.
3. Eucaïne is superior to cocaine in being less likely to produce toxic symptoms.
4. Eucaïne is superior to cocaine in producing far less unpleasant subjective symptoms, especially in the pharynx.

StGeorge Reid.

**Lermoyez and Griner.**—*Inter-cricothyroid Laryngotomy. Decubitus Necrosis of the Cricoid Ring. False Passage in the Cricoid. Death.* "Ann. des Mal. de l'Or., de Lar.," etc., Jan., 1897.

THE author reports this as an instance of trouble following laryngotomy, proving that procedure to be not wholly free from danger. The patient was a man of thirty-six, suffering with dyspnoea, the consequence of oedema complicating laryngeal tuberculosis. Tracheotomy was contra-indicated on account of the size and position of the thyroid gland. For some twenty days, while the usual form of canula formed the respiratory passage, attacks of dyspnoea were frequent, and the patient finally succumbed before a longer canula was obtained. *Post mortem*, it was found that the end of the somewhat short canula had produced ulceration of the posterior wall of the larynx. Necrosis was present, and a considerable cavity in the cricoid cartilage formed a recess into which the end of the canula projected. To this accident the previously inexplicable attacks of dyspnoea were to be attributed. The authors lay stress on the liability of the cricoid plate to become the seat of decubitus necrosis, when laryngotomy is employed in the place of tracheotomy, exposed as that cartilage is in all cases to pressure against the spinal column.

*Ernest Waggett.*

**Lewin, W.**—*Spasmus Glottidis.* "Arch. für Kinderheilk.," 1897, Vol. XXI., p. 353.

ALTHOUGH Lewin agrees with Henoch that spasmus glottidis most frequently occurs in children with rickets, he believes that it also occurs as a stomach reflex in children without the slightest trace of rickets.

A boy six months old was nourished by a wet nurse from birth, and thrived well. Then Nestlé's milk was used with equally good results. Later on so-called "children's milk" was substituted. Very shortly after starting the use of this milk spasm of the larynx set in, lasted three weeks, and would yield to no medical treatment. The "children's milk" was then stopped, and immediately the spasm also ceased. The child's mother, thinking that the milk had perhaps been too strong, watered it, and tried feeding the child with the thinner preparation. Spasm of the glottis set in again immediately, and again ceased as soon as the milk was stopped.

This child never presented the slightest trace of rickets. It should further be observed that the "children's milk" used was perfectly good, as L. had often used it with excellent results in other children. The condition in this case was, therefore, a reflex spasm due to an idiosyncrasy of the stomach against a particular food.

*A. J. Hutchison.*

**Mendel.**—*Note on the Etiology of Polypi of the Larynx.* "Arch. Int. Laryng., Otol., et Rhin.," Tome IX., No. 2.

THE author here relates two cases which go to support the opinion that laryngeal polypi are of a purely inflammatory origin.

The first case was that of an actor, aged thirty-one, who, after four or five months' work, found his voice failing. Examination revealed general laryngeal hyperæmia and swelling, which more particularly affected the vocal cords. At the junction of the anterior third with the posterior two-thirds of the left cord was a small, well-defined red nodule. Rest and antiphlogistic treatment were adopted, and in one week's time the nodule had entirely disappeared.

The second case was that of a man of thirty-five, who complained of hoarseness of two or three weeks' duration. Examination showed localized congestion of the left cord, which was red and thickened. Attached to the centre of its free edge was a polyp quite as large as half a lentil. Simple astringent treatment was adopted, and, with the return of the cord to its normal colour, the polyp visibly

diminished in size. At the end of fifteen days it so far decreased as only just to project beyond the outline of the cord.

These small tumours were evidently inflammatory in origin; and the author asks if it is not possible that the well-defined polypi sometimes found in the larynx are the result of growth of small inflammatory excrescences such as these two specimens.

Ernest Waggett.

**Refslund.** — *Congenital Malformation of the Epiglottis.* "Münchener Med. Woch.," 1896, No. 48.

A CHILD of two and a half months had marked laryngeal stridor since its birth. The mother stated also that two other children who died at the ages of six weeks and nine months had a similar respiration affection. The examination showed in the pharynx and larynx nothing abnormal, except a marked lateral compression of the epiglottis, which was retracted on to the larynx during inspiration and erect during expiration. The child died one month later of pneumonia. The *post-mortem* examination showed that the epiglottis had a length of five millimètres, and was from one to one and a half millimètres in thickness, and so strongly curved that the inner parts of both halves touched one another.

[The reporter has observed a similar case. A nine-year-old child had had a stridor since its birth. The dyspnoea became so very much increased that tracheotomy had to be performed. Neither by laryngoscopy nor by examination with the probe through the tracheal opening could any abnormality be found in the larynx and trachea, except an elongated epiglottis, which covered the larynx during expiration and inspiration.]

Michael.

**Turner, A. J.**—*Intubation as a Substitute for Tracheotomy in Acute Laryngeal Stenosis in Children.* "Intercolonial Med. Journ. of Australasia," Dec. 20, 1896.

IN comparing the results, three years in which tracheotomy was practised almost exclusively, and three years in which it had given way to intubation, are taken, the cases occurring in the Brisbane Children's Hospital.

| YEAR.                | PRIMARY TRACHEOTOMIES. |             |         | INTUBATIONS. |             |         | SECONDARY TRACHEOTOMIES. |             |         | TOTAL OPERATIONS. |             |         |            |
|----------------------|------------------------|-------------|---------|--------------|-------------|---------|--------------------------|-------------|---------|-------------------|-------------|---------|------------|
|                      | Operations.            | Recoveries. | Deaths. | Operations.  | Recoveries. | Deaths. | Operations.              | Recoveries. | Deaths. | Operations.       | Recoveries. | Deaths. | Mortality. |
| 1889-90 .....        | 23                     | 6           | 17      | —            | —           | —       | —                        | —           | —       | —                 | —           | —       | —          |
| 1890-91 .....        | 21                     | 8           | 13      | —            | —           | —       | —                        | —           | —       | —                 | —           | —       | —          |
| 1891-92 .....        | 24                     | 7           | 17      | 6            | 2           | 4       | —                        | —           | —       | 74                | 23          | 51      | 68'9 %     |
| 1892-93 .....        | —                      | —           | —       | 31           | 14          | 17      | 6                        | 2           | 4       | —                 | —           | —       | —          |
| 1893-94 .....        | —                      | —           | —       | 53           | 21          | 32      | —                        | —           | —       | —                 | —           | —       | —          |
| 1894. 6 months ..... | 1                      | —           | 1       | 11           | 6           | 5       | —                        | —           | —       | 96                | 41          | 55      | 57'3 %     |
| ANTITOXIN PERIOD.    | 69                     | 21          | 48      | 101          | 43          | 58      | 6                        | 2           | 4       | —                 | —           | —       | —          |
| 1895-96 .....        | 2                      | 1           | 1       | 40           | 27          | 13      | 2                        | —           | 2       | 42                | 28          | 14      | 33'3 %     |

The following arguments are advanced in favour of intubation:—The procedure is rapid, there is no loss of blood, no anæsthesia depression nor increased dyspnoea, and no risk of cellulitis, as there is no open wound, and the canula is not apt to become plugged with dry mucus, and so can be left for days undisturbed; the tube is easier removed, and there is no scar. Feeding really presents no difficulties which are not easily surmounted. Six days is given as the best

period for retention of the tube. The string should always be attached to the tube, and precautions taken to prevent its being pulled out by the patient. Cases are given.

*R. Lake.*

**Stoerk** (Wien). — *On Cocaine Anæsthesia.* "Wiener Med. Woch.," 1896, No. 44.

THIS paper is of unusual interest, in which this celebrated authority describes the influence of cocaine on the technique of intralaryngeal surgery. If we operate without an anæsthetic we produce by the introduction of an instrument into the larynx strong reflex contraction of the muscles. By this contraction we are enabled to remove a neoplasm of the vocal bands, because a stable body is removed by the instrument—only the strong reflex contraction gives the necessary resistance by which the neoplasm is pressed into the loop or guillotine. Without doubt the absence of these reflexes is one of the disadvantages of cocaine, but it cannot be regarded in comparison to the great advantage of local anæsthesia. But by the absence of the reflexes we are obliged to change our instrumentarium. Snares and guillotines are useless in the great majority of cases. Instead of them we must use sharp forceps, which attack the neoplasm of both sides, and can cut them in spite of the mobility of the tissues of the larynx. The author concludes with the description of four cases of cocaine intoxication observed by him. In all four cases only small doses had been used.

*Michael.*

**Vulpis, W.**—*On Primary Laryngo-Tracheal Ozæna.* "Deutsche Med. Woch.," Jan. 28, 1897.

M. R., aged eighteen, complained of suppuration of her right and deafness of her left ear. She spoke with a very hoarse, sometimes quite aphonic, voice, and her breath had the characteristic ozæna stink. The hoarseness had commenced about four years ago—at first periodic, then continuous; then attacks of coughing in the morning, by which tough mucous crusts were brought up. The nose was found full of bad-smelling pus, but no crusts; moreover, the nasal condition was said to have commenced not more than eight weeks ago. The condition of the naso-pharynx was similar. On laryngoscopic examination, the lingual tonsil was found moderately enlarged; the false cords were so much thickened as to completely hide the true cords during respiration; their colour was pale yellowish red, their consistence dense. The interarytenoid portion was in a similar condition. The vocal cords were rough, and a dirty yellow grey on the upper surface and margins, and they did not meet completely. The subglottic portion of larynx and the trachea were covered with dirty greyish green crusts. Still, in neither larynx nor trachea was ulceration, or even excoriation, to be found. In the crusts, Löwenberg's diplococcus was present in large quantity, and with very few accompanying micro-organisms (no leptothrix). On this, however, the author lays little stress, as he considers the presence or absence of the characteristic smell far more important than the presence or absence of Löwenberg's bacillus. Several other reported cases are cited and briefly discussed. The author appears to doubt the genuineness of nearly all.

*A. J. Hutchison.*

**Whalen, C. J.**—*Laryngo-Pulmonary Phthisis.* "Journ. Am. Med. Assoc.," Feb. 13, 1897.

LARYNGEAL complications occur more frequently with pulmonary phthisis than is generally thought. Statistics show that they occur in about thirty per cent. of all cases of consumption. The laryngeal trouble is often neglected, owing to its obscurity by the pulmonary symptoms, until ulceration begins. Dysphagia is the most severe symptom, and hastens the fatal termination by keeping the patients

from eating. Very few cases recover. General treatment should be given, such as ol. morrhue, creosote, hyperphosphites, etc. Locally a spray of trichloride of iodine gives satisfactory results until ulceration occurs. When ulceration is present, guaiacol, fifteen per cent. to fifty per cent. in olive oil sprayed into larynx, gives best results. Used fifteen minutes before eating it produces local anæsthesia, so patient can eat with comfort. It also has a beneficial result on the ulceration, so cicatrization may occur in a few weeks, even when lactic acid and other applications fail.

Oscar Dodd.

## E A R.

**Brieger, O.** (Breslau).—*On General Pyæmic Infection following Aural Suppuration.* "Arch. of Otol.," Vol. XXV., No. 4.

THE author points out that pyæmia may result from aural suppuration without the intervention of sinus phlebitis, and even without evidence of osteo-phlebitis, simply from suppuration occurring in the mucosa of the tympanum. This may take the form of a *dermato-myositis*, with a peculiar jelly-like œdema of the affected muscle and an œdematous and almost erysipelatous condition of the skin over it, but without any tendency to suppuration. In ordinary pyæmia suppurative metastases in the muscles are not uncommon. Osteo-phlebitis in the temporal bone may give rise to pyæmia by extension to the lateral sinus, but also without it.

The difficulties in the diagnosis of thrombo-phlebitis of the lateral sinus are discussed. The temperature curve is frequently modified by co-existing conditions, though when typical it is diagnostic of pyæmia. The writer protests against founding a diagnosis of pyæmia on a single rigor, which may occur in middle ear suppuration without pyæmia. It is sometimes difficult to make the diagnosis from typhoid fever, tuberculosis, or malaria. The inconclusive value of ophthalmoscopic signs, Griesinger's cervical and occipital œdemas is insisted on. Inspection of the exposed sinus is only conclusive if it reveals gangrenous spots on the sinus wall, or fistulæ passing through them. Palpation is equally useless. Pulsation is no criterion of absence of thrombosis. Examination of the contents is recommended as practised either by exploratory puncture or incision, the former in the first instance, and the latter if the former gives no positive result—the presence of pus—it being noted that the aspiration of fluid blood from the sinus does not exclude the presence of thrombus. The chiselling open of the mastoid is the first therapeutic step, and evacuation of extra-dural pus the next, the latter sometimes leading to cure of thrombo-phlebitic pyæmia by stopping the formation of fresh excitants.

When thrombosis has been demonstrated, the sinus should be widely opened and evacuated. "If complete disintegration of the thrombus exists, with firm "central [heartwards] occlusion, and that portion which is opened is filled "with pus and thrombus masses, the evacuation of the pus by incision may lead "to a cure without anything further." As regards the ligature of the jugular vein, the author has arrived at the following conclusions: "The systematic application "of ligation as an integral part of the operative therapy of sinus phlebitis is not "justified. It is an error in pyæmia without sinus phlebitis. A proviso for its applica- "tion is the positive demonstration of sinus thrombosis by examination of the "contents of the sinus. In the presence of a solid occlusion in the direction of the "jugular vein, if evidence is wanting for the assumption of the extension of the "thrombosis into the vein, ligature is superfluous, and, under certain circumstances,

"injurious. In addition, dependence on the general condition after the sinus has "been opened, as a guide for ligation of the jugular, as Jansen proposes, is "questionable." The principal point is the local condition in the vein, or at least at the cardiac end of the thrombus. No definite directions can be given as to the time at which operation is justified, or how long it can be postponed. Purulent lepto-meningitis is the one contra-indication. Pulmonary metastases do not contra-indicate.

Thrombosis of the cavernous sinus is most commonly the result of extension from the lateral through the superior petrosal sinus, but it may arise without this, as, for instance, from conveyance of suppuration along the carotid canal (Koerner). The local symptoms produced are exophthalmos, paralysis of the ocular muscles, immobility of the globe, œdema of the lids, and chemosis of the conjunctiva, with or without hæmorrhages. In cases in which the clinical signs have been complete, and in which a *post-mortem* examination, after operative opening of the lateral sinus, revealed absence of thrombus in the cavernous sinus, Dr. Brieger points out the probability that the mere opening of the lateral sinus may bring about a loosening and aspiration of the clot in the cavernous one. He suggests this as a possible step in the operative treatment of cavernous sinus thrombosis, from whatever cause arising.

*Dundas Grant.*

**Grant, Dundas.**—*Deafness arising from the Residua of Suppurative Inflammation of the Middle Ear.* "Clin. Journ.," Dec. 23, 1896.

THESE residua are : (1) perforations ; (2) cicatricial formations ; (3) inflammation and destruction of the structure of the labyrinth ; (4) stenosis of the external meatus ; (5) granulations ; (6) desquamation products. The treatment of these conditions resolves itself into two elements : first, to liberate the stapes ; secondly, to supply a substitute for the tympanic apparatus. To liberate the stapes : (1) restore ventilation of the tympanum ; (2) remove all accumulations in the sacculated cavities by means of intratympanic syringe ; (3) remove granulations ; (4) divide any cicatricial bands which are accessible ; (5) if ossicles are fixed, liberate the stapes by dividing the joint between it and incus ; or (6) make complete excision of larger ossicles if hearing power very bad and exit of discharges is impeded. To supply a suitable conducting apparatus, take a small wisp of long-fibred non-absorbent wool of about three-quarters of an inch in length, trim the extremities, and tie a thread round the middle of the wisp. Then spread the fibres out in a radiating manner, so as to make a round pellet, and turn in the peripheral extremities, so that a somewhat springy cushion is formed, about the size of a pearl shirt-button. After dipping this in paroleine, carry it down to the tympanic membrane, and press it against the head of the stapes. This form is most useful where the head of the stapes is exposed. Where the perforation is in the postero-inferior quadrant, it is better to twist up a long, thin, pellet of wool, moisten it, and introduce it into the perforation, so as to bulge upwards, and approach or touch the stapes. Thin free cicatrices over the stapes are best treated by painting over with contractile collodion, the brush being drawn on to the adjacent wall of the meatus. The prognosis of the above class of cases is extremely favourable compared with that of non-suppurative sclerotic inflammation.

*Middlemass Hunt.*

**Hopkinson, B. Mervill.**—*Acute Otitis Media.* "Journ. Am. Med. Assoc.," Feb. 27, 1897.

HE gives experiences in treatment, and mentions particularly the immediate relief of pain produced by syringing the ear several times a day with a solution of bi-

chloride of mercury (1—1000) as hot as can be borne. He also used the Politzer inflation, and pilocarpin (gr.  $\frac{1}{4}$ ) twice a day, which produced free diaphoresis.

Oscar Dodd.

**Lommel** (Basel).—*Contribution to the Knowledge of the Pathological and Anatomical Changes in the Middle Ear and the Cuneiform Cavity in cases of Genuine Diphtheria. Report on Twenty-five Post-mortem Examinations.* "Zeits. für Ohrenheilk.," Band 29, Heft 4.

In twenty-seven of the cases (96 per cent.) pathological degeneration was found in the middle ear; in two cases catarrhal occlusion of the Eustachian tube; in five, otitis media exudativa; in thirteen, otitis media purulenta. In twenty-one cases the mucous membrane of the Eustachian tube was normal, so that the diphtheritic affection had not been propagated *per continuitatem*, but was a symptom of this infectious disease. In ten of the cases also the cuneiform cavity was examined. One of these was normal; in three cases catarrhal inflammation of the mucous membrane was present; in three cases the cavity had sanious and in three others purulent contents.

Michael.

**Redmer, Konrad** (Danzig).—*On the Spontaneous Recovery of Cholesteatoma and Cholesteatoid Affections in the Temporal Bone.* "Arch. of Otol.," Oct., 1896.

REDMER draws attention to those cases of old-standing suppuration in the middle ear in which the bony partitions between the meatus and antrum, and between the meatus and attic, have been cleared away by gradual erosion or by exfoliation, leaving such a confluence of the meatus, tympanum, attic, and antrum as is seen after a well-performed Zaufal's (or Stacke's) operation, there being no retro-auricular opening. He advises that the course of this spontaneous cure should be adopted as the model for our operative procedures, and that we should avoid leaving an opening behind the auricle.

As regards the use of the term "cholesteatoma," he urges that it should be reserved for those cases to which Virchow applied it, namely, heterologous epidermic tumours, found, as elsewhere, in the temporal bone, quite independent of any suppurative condition. The common suppurative cholesteatomata of the aural surgeon should be designated "retention masses resembling cholesteatoma," or "hyperplastic epidermis," or "epithelial cysts," according to the genuine nature. He rejects Haug's idea of closing the Eustachian tube as likely to encourage rather than combat the desquamative process, holding that free ventilation is the condition most favourable to the drying of the epidermis.

Dundas Grant.

**Röpke, F.** (Solingen).—*A Case of Pyæmia after Acute Suppuration of the Ear; Operation; Recovery.* "Arch. of Otol.," Oct., 1896.

IN spite of enlargement of the perforation the suppuration continued, and severe constitutional disturbance ensued. Tenderness was confined to the tip of the mastoid. There came on several rigors and extreme oscillations of temperature, and, after some delay, operation was permitted. A superficial cavity was found on chiselling, which extended back to the groove for the lateral sinus and down to the tip of the mastoid. The sinus was thrombosed, as shown by puncture, but its walls were normal. On the tenth day the patient was well enough to get up, and soon recovered. The infection was probably from the veins of the petrous bone—osteophlebitis—and not from the lateral sinus—sinus-phlebitis—as in the latter case the sinus wall would probably not have been healthy and the thrombus non-purulent. The pulse before the anæsthetic was 112, but during the narcosis it

went down to 86-99. [This behaviour of the pulse is contrary to what Macewan considers typical of septic infections.—D.G.]  
*Dundas Grant.*

**Stirling, J. W.** (Montreal).—*Thrombosis of the Petrosal, Cavernous, and Circular Sinuses occurring in Scarlet Fever and due to Acute Suppurative Otitis Media.*  
 "Canada Med. Rec.," Nov., 1896.

NOTES of a case where the left ear was affected, following scarlet fever, with rapid implication of the mastoid region. The mastoid was opened and some carious bone removed, but on the third day after the operation the left upper eyelid became intensely oedematous, followed on the following day by the right. The child died on the tenth day after the operation. The *post-mortem* examination showed thrombosis of the left superior petrosal sinus, and of the cavernous and circular sinus.  
*StGeorge Reid.*

**Walker, H. Secker.**—*A Case of Suppurative Otitis Media complicated with Cerebellar Abscess.* "Brit. Med. Journ.," March 6, 1897.

THE patient, a boy fourteen years of age, was seen by the reporter, with Mr. J. W. Hatton, on November 22nd, 1896. The boy had suffered with right-sided otorrhoea and polypus for some years. He had had pain in the left ear four months previous to the above date, which was followed by discharge. This pain had returned and was constant, and was spread over the head, but was chiefly localized in the occipital region. Five weeks earlier he had had attacks of shivering, and now looked pale and was rapidly wasting. He had vomited occasionally in the morning; constipation was marked, and there had been delirium at times.

On examination of the left ear a polypus was seen deep in the meatus, the discharge was offensive, and there was tenderness over the mastoid on deep pressure. The temperature had been between 99° and 100°, and the pulse rate from 110 to 130. There was no optic neuritis, no paralysis, and no ocular or facial spasm; the grasp was weak but equal; the knee jerk was increased on the left side and normal on the right. Cerebration was not delayed. There was no doubt about the mastoid disease, but the writer did not feel justified in diagnosing intracranial trouble.

*Operation.*—The mastoid was exposed by the ordinary incision; when, on reflecting the periosteum, the bone superjacent to the antrum was seen to be of a dirty grey colour. This was easily removed with a chisel, and the antrum found filled with yellowish, putty-like, and offensive material. The operation was carried out on Stacke's lines, the bony ridge between the antrum and ear not being removed below the junction of the middle and upper thirds of the meatus, in order to avoid the facial nerve.

The roof and posterior wall of the antrum were carious and perforated, and consequently removed, thereby exposing the dura mater lying against the temporo-sphenoidal and lateral cerebellar lobes. The dura, when exposed, was healthy.

For ten days the boy did well—headache and vomiting ceased, he was bright, and the temperature became sub-normal; the pulse averaged 112, and he was only troubled with constipation. On the eleventh day vomiting and headache recurred, but there was no optic neuritis. As these symptoms continued it was decided to explore the cerebellum, that being considered the probable site of the mischief.

The old operation wound into the posterior fossa was enlarged and the dura incised. The abscess cavity was entered at the second puncture, and about two and a half drachms of very offensive pus removed. A double drain was left in, and the wound dressed. Two days later (sixteen after the first operation) all the symptoms reappeared, and a little pus was found to have accumulated in the cavity. Three weeks later there were several attacks of vomiting, and the tube

was removed as probably acting as an irritant, with a result that for two weeks more he did well, when suddenly all the old symptoms recurred with redoubled force, the boy rapidly becoming a mere skeleton.

The cerebellum was now opened a little further back, and pus found at once, the cavity was washed out, and two decalcified bone tubes left in. The boy now rapidly and completely recovered, but, oddly, developed now a transient optic neuritis.

The author alludes to the paper on cerebellar abscess by Ackland and Ballance (for abstract, *see* JOURNAL OF LARYNGOLOGY). [The occurrence of vomiting after opening of the cranial cavity, and also after incision of the dura, is especially noteworthy.—ED.] R. Lake.

**Zwaardemaker, H.** (Utrecht).—*Acoustic Railway Signals and Acuteness of Hearing.* "Arch. of Otol.," Oct., 1896.

THE writer points out that as railway drivers get older—and more experienced—their hearing power for the upper tones of the scale becomes defective. Hence the sound of a mouth or steam whistle, when forcibly blown so as to accentuate the over-tones, may not be heard. A signal horn tuned to a *d'orchestre* is more likely to be heard. As a minimum, employes on railway duty should have hearing for whispered speech at one mètre. When engaged they should have normal hearing, or nearly so. At intervals of from two to five years they should be retested with a continuous series of tones. Dundas Grant.

## Obituary.

### CORRADO CORRADI.

WE regret to have to announce the death of Dr. CORRADO CORRADI of Verona, at the early age of thirty-seven. He had only recently gained the position of Liber Docent in the University of Turin. He had been Secretary of the Società Italiana di Laringologia from its foundation, and was a most ardent student and investigator in our speciality; many of his contributions have been referred to or abstracted in our pages. His devotion to laryngology and otology, and the success which he had already obtained, although practising in one of the smaller Italian cities, are both shown by the fact that he has bequeathed some £1200 to his special department in the Civil Hospital of Verona. StClair Thomson.

### NOTICES OF SOCIETY MEETINGS.

AMERICAN LARYNGOLOGICAL SOCIETY, May 4th, 5th, and 6th, at Washington, D.C.

AMERICAN OTOLOGICAL ASSOCIATION, May 4th, 5th, and 6th, at Washington, D.C.

WESTERN OPHTHALMOLOGICAL, OTOLOGICAL, LARYNGOLOGICAL, AND RHINOLOGICAL ASSOCIATION, April 8th and 9th, St. Louis, Missouri.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION, April 30th, London, England.

LONDON LARYNGOLOGICAL SOCIETY, April 14th, London, England.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS, May 4th, 5th, and 6th, at Washington, D.C.

# THE LARYNGOLOGICAL AND OTOLOGICAL CLINICS OF ENGLAND AND SCOTLAND.

THE object in reprinting the following tables has been to enable gentlemen wishing to obtain post-graduate instruction in England and Scotland to have before them, in tabular form, a full list of all clinics open to them. And we take this opportunity of expressing our sense of gratitude for the universal kindness and courtesy shown by the deans and secretaries of the various institutions in supplying the JOURNAL with the information asked for.

Although it is obvious that the individual teacher is really the magnet which attracts—more, indeed, than the amount of material at the disposal of the student—yet it has not been found practicable here to insert their names; and reference to the “Medical Directory” will give the required information.

The Editors will be grateful for notice of any irregularity in the present text, and in future for changes made in the clinics, as well as for notice of omissions or additions.

| Name.                   | Ear Clinic.     | Throat Clinic. | Remarks.  | Duration. | Fees.                   |
|-------------------------|-----------------|----------------|---|-----------|-------------------------|
| ST. BARTHOLOMEW'S ..... | Tu., F., 2 p.m. | METROPOLITAN   | MEDICAL SCHOOLS.<br>The fee includes the whole hospital practice .....  | 3 months  | £15 15s.<br>£5 5s. each |
| ST. THOMAS'S .....      | M., 1.30 p.m.   |                |   |           |                         |
| ST. GEORGE'S .....      | Tu., 2 p.m.     |                |   |           |                         |
| GUY'S .....             | Tu., 1 p.m.     |                |   |           |                         |
| ST. MARY'S .....        | M., Tu., 3 p.m. |                |   |           |                         |
| KING'S .....            | Tu., 2.30 p.m.  |                |   |           |                         |
| UNIVERSITY .....        | M., Th., 9 a.m. |                |   |           |                         |
| CHANCERY CROSS .....    | F., 9.30 a.m.   |                |   |           |                         |
| LONDON .....            | W., 9 a.m.      |                |   |           |                         |
| ROYAL FREE .....        | Sa., 3 p.m.     |                |   |           |                         |
| WESTMINSTER .....       | W., Sa., 9 a.m. |                | Fees, etc., enquiries to be made of the Dean.<br>Demonst. Throat, Fri., 3 p.m. Fees for hosp. pr., each dept.<br>Throat operations, Fri., 1.30 .....  | 3 months  | £3 3s.<br>£5 5s.        |
| MIDDLESEX .....         | Tu., 9 a.m.     |                |   |           |                         |
|                         |                 |                | Attendance fees on application to Dean. For particulars regarding Throat Course apply Physician in charge.<br>Lectures: Aural, Wed., 3 p.m., Fri., 3 p.m. Summer session for lady students.<br>No post-graduate course.<br>Ditto. | .....     |                         |

| Name.                                | Ear Clinic.   | Throat Clinic.                                    | Remarks.   | Duration.               | Fees.                           |
|--------------------------------------|---|---|--|-------------------------|---------------------------------|
|                                      |   | <b>SPECIAL</b>                                    | <b>HOSPITALS.</b>  |                         |                                 |
| GOLDEN SQUARE .....                  | { Daily, 2.30 p.m.<br>M., 9 a.m.                          | Daily, 2.30 p.m.<br>Tu., F., 6.30 p.m.            | £2 2s. per course of Lectures given in the winter .....                                      | { 3 months<br>6 months  | £3 3s.<br>£5 5s.                |
| LONDON THROAT .....                  | { Daily, 2 p.m.<br>Tu., F., 5.30 p.m.                     | Tu., F., 6.30 p.m.                                | Fee for Lectures per term £1 1s. Hospital practice .....                                     | { 1 month<br>2 months   | £2 2s.<br>£5 5s.                |
| CENTRAL DITTO .....                  | { Tu., F., 5.30 p.m.<br>M., W., Th., Sa.,<br>2.30 p.m.    | Tu., F., 5 p.m.<br>M., W., Th., Sa.,<br>2.30 p.m. | Throat Hospital for London post-graduate course .....  | { 3 months<br>6 months  | £3 3s.<br>£5 5s.                |
| ROYAL EAR .....                      | { M., W., Sa., 3 p.m.<br>Tu., 9.30 a.m.<br>Th., F., 7.30. | .....   | Clinical Lectures, apply to Secretary .....  | 3 months                | £2 2s.                          |
| GREAT NORTHERN CENTRAL .....         | Tu., F., 2.30 p.m.<br>Tu., Sa., 10 a.m.                   | <b>EXTRA-MURAL</b>                                | <b>METROPOLITAN.</b>   | 3 months                | £2 2s.                          |
| WEST LONDON .....                    |   | Tu., F., 2.30 p.m.<br>Sa., 10 a.m.                | Commence third Wed. Jan., May, Oct. For information<br>apply Hon. Sec. post-graduate course. | 3 months                | £3 3s.                          |
| OWEN'S COLLEGE, MANCHESTER .....     | <b>SCOTCH</b>   | <b>AND PROVINCIAL</b>                             | <b>IAL MEDICAL SCHOOLS.</b>  | { 1 course<br>2 courses | £1 1s.<br>£1 11s. 6d.<br>£2 2s. |
| UNIVERSITY OF DURHAM .....           | { M., 2 p.m. Tu., 1 p.m.<br>W., Th., F., 2 p.m.           | .....   | Clinics at Ear Institute free. Post-graduate course, June,<br>first week                     | { 3 months<br>6 months  | £1 1s.<br>£1 1s.                |
| ABERDEEN GENL. DISPENSARY .....      | Th., 10 a.m.<br>Tu., F., 3.30 p.m.                        | Th., 10 a.m.<br>Tu., F., 3.30 p.m.                | None.<br>Courses commence April, last until June .....                                       | 3 months                | £2 2s.                          |
| VICTORIA UNIVERSITY, .....           | M., Th., 2 p.m.   | M., Th., 2 p.m.                                   | At Royal Infirmary. No course.   |                         |                                 |
| UNIVERSITY COLL., LIVERPOOL .....    | Daily, 9.30 a.m.  | Daily, 9.30 a.m.                                  | For fees enquire of the Dean.  |                         |                                 |
| BIRMINGHAM .....                     | M., 2.30 p.m. W., 1.30 p.m. F., 1.0                       | W., 1.30 p.m.                                     |  |                         |                                 |
| YORKSHIRE COLLEGE, LEEDS .....       |   | <b>EDINBURGH.</b>                                 |  |                         |                                 |
| EYE, EAR, AND THROAT INFIRMARY ..... | M., Th., Sa., 12 noon<br>Tu., F., 11 to 12 noon           | Tu., F., 4 p.m.<br>Tu., F., 11 to 12 noon         | No regular lectures .....  | 3 months                | £2 2s.                          |
| ROYAL INFIRMARY .....                |   | <b>GLASGOW.</b>                                   | No post-graduate instruction.  |                         |                                 |
| ANDERSON'S COLLEGE .....             | { Th., 8 p.m.<br>Tu., F., 1 p.m.                          | .....   | Ear courses commence May and November .....  | 3-6 months              | £1 1s.                          |
| CENTRAL DISPENSARY .....             | Tu., F., 12 (winter)                                      | Tu., F., 3 (summer)                               | Apply Dean for fees, syllabus of Lectures, etc.  | .....                   | Free                            |
| ST. MUNGOS COLLEGE .....             | Tu., W., 3.30 p.m.  | Tu., W., 3 p.m.                                   |  |                         |                                 |
| ROYAL INFIRMARY .....                |   | <b>DUNDEE.</b>                                    |  |                         |                                 |
| ROYAL INFIRMARY .....                | Tu., F., 2 p.m. (winter)                                  | Tu., F., 2 p.m. (winter)                          | Ear courses commence May and November .....  | .....                   | £1 1s.                          |
| THROAT AND EAR INSTITUTION .....     | M., Th., 2 p.m. (summer)                                  | M., Th., 2 p.m. (summer)                          | No post-graduate course .....  |                         |                                 |

## REVIEWS.

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**Heymann.**—*Handbuch der Laryngologie und Rhinologie.* 5 und 6 Lieferung.  
(Wien: Hölder. 1896.)

OF the five articles contained in the above parts of Heymann's manual those on the "Histology of the Nasal Mucous Membrane" and on the "Physiology of the Nose and its Accessory Cavities" will be found the most interesting. The former, by Prof. Schiefferdecker, of Bonn, is a most exhaustive study of microscopic details, beautifully illustrated by instructive drawings from the author's sections. Following the usual division of the nasal mucous membrane into vestibular, respiratory, and olfactory regions, he describes minutely the microscopic characters of each, and tries to define as far as possible their varying and uncertain limits. This becomes most difficult when mapping out the olfactory region, as here we find great individual differences, and it is probable that recurrent nasal catarrhs lead to destruction of the olfactory epithelium, and its replacement by the ciliated epithelium of the respiratory tract. Two diagrams are reproduced from an article by Von Bruns, showing the extent of the olfactory region in two adults. If these are to be regarded as average cases, it is evident that our text-books give a false idea as to the extent of this area, which is here shown to be limited to the middle of the upper turbinated bone and the corresponding part of the septum.

Since Heidenhain, in 1870, declared the glands of the nasal mucous membrane to be exclusively serous, there has been much controversy as to the true nature of those in the respiratory region. Klein found both mucous and serous glands, Stöhr described the individual glands as "mixed" serous and mucous, and Paulsen said they were lined with "mixed" epithelium. Schiefferdecker is of opinion that they are probably all mucous glands, "though some are lined throughout with albuminous cells, others have a few mucous cells, and some are lined with mucous cells entirely." "The fact that the mucous cells in these glands are much fewer than in those in the palate," he says, "does not prove that the nasal glands are not mucous glands, but only that they secrete in a different way."

More important than these conclusions as to the minute structure of the nasal glands are the author's observations regarding the system of basal-canalculi ("basal-canälchen") which connect the surface of the mucous membrane with plasmatic spaces in the mucosa, and allow of the free passage of serous fluid. These canals, which most observers seem to have overlooked, were first described by Heiberg in 1872, and again by Chatellier in 1887. They found them in hypertrophied mucous membrane, but Schiefferdecker says he finds them without difficulty in normal tissue. These canals are numerous, possess no lining membrane, and pass at right angles through the basal membrane, "to open into clear, sharply-defined spaces, between the delicate bundles of connective tissue in the

adenoid layer." Chatellier thought these canaliculi were in direct connection with the lymphatics, an opinion which the author does not share. Their function is evidently to supply a constant flow of watery serum to the surface of the mucous membrane. The amount of serum poured out will vary with the blood pressure. Hence the increase in watery discharge in those affections of the nose associated with engorgement of the erectile tissues.

There can be no doubt that if these observations of Schiefferdecker are confirmed, we shall be better able to explain those rapid changes in the amount and consistence of the nasal secretion so often met with in pathological states of the nasal passages.

Prof. Gaule, of Zurich, is responsible for the article on the "Physiology of the Nose and its Accessory Cavities." After describing the respiratory functions of the nose—the warming, moistening and purifying of the air—the author details the experiments of Paulsen, Zwaardemaker, and others on the course of the air current in traversing the nasal passages. All these observers agree that it mainly passes through the middle meatus, only a small part reaching the superior meatus. This leads to a minute and interesting discussion of the mechanism by which the air is brought into contact with the olfactory region, and of the part played by the accessory cavities as regards the sense of smell. On these points the author adopts the theory of Braune and Clasen, which is briefly as follows:—At the beginning of each inspiration a negative pressure is produced in the nasal passages and accessory cavities. The current of air which rushes in through the anterior nares to restore equilibrium divides into two branches, a larger one passing through the choanæ to equalize the negative pressure in the pharynx and lungs, and a smaller one towards the olfactory region to equalize the negative pressure in the accessory cavities. The latter alone is of importance in the mechanism of smell. If during inspiration the anterior nares be narrowed, as in "sniffing," the exhaustion of the sinuses will be more complete, and so a larger current of air will be drawn towards the olfactory region.

The theory is a very pretty one, but the evidence supporting it is not convincing. In a former article in this same manual Dr. Mihalkovics raised objections to it on the grounds that persons with imperfectly developed sinuses showed no diminution of the sense of smell, and that in animals with poorly developed accessory cavities (carnivora) the sense of smell was highly developed. We may add that the openings into the sinuses are not constructed to admit of the rapid entrance and exit of air currents, and that most of them are situated in the middle meatus, and not in the olfactory region. Lastly, there is no clinical evidence that disease of the sinuses—double antral suppuration, for instance—diminishes *per se* the sense of smell.

The various speculations as to how the olfactory nerve receives impressions are discussed at length, and the chemical theory of Haycraft and Ramsay is adopted. The recently advanced view of Zwaardemaker, that the odorous particles affect the nerves by setting up vibrations of the ether, is rejected as wanting sufficient basis.

Dr. Hausemann writes a brief paper on the methods of making a

*post-mortem* examination of the nasal cavities, and recommends the rapid and simple method of Harke. In this the nasal cavities are opened, after the removal of the brain in the usual manner, by a vertical median saw-cut through the frontal and occipital bones and the base of the skull. As a rule the two halves of the skull can then be pulled apart and the cavities thoroughly examined, or it may be necessary first to divide the atlas.

There are two excellent practical articles on the "Methods of Examining the Nasal Cavities" and the "Symptomatology of Nasal Diseases" by Dr. Spiess and Dr. Bloch respectively. Both articles are complete and well done, but without detailing any new method or observation calling for remark.

*Middlemass Hunt.*

**Ross, F. W. Forbes.**—*Intestinal Intoxication in Infants.* (London: Rebman Publishing Company, Limited.) 7s. 6d.

THIS brochure contains much that is of use to the practitioner, and throws a fuller light on certain of the abnormal conditions of the alimentary canal in infants, which, if not always the one usually accepted, will be found serviceable on many occasions, as the practical experience of an observant and practical man. The bacteriological researches and the deductions drawn from the results are of distinct value, and well worked out. We hope that in a future edition Dr. Ross will endeavour to raise those portions of his book which are not too clear, to that standard to which he evidently can attain, as the chapter on bile more especially proves. We must also congratulate the publishers on the good style of the binding and printing.

**Sutton, J. Bland.**—*Ligaments: their Nature and Morphology.* Second Edition. (H. K. Lewis, 136, Gower Street, London. 1897.) 114 pp., post 8vo, 4s. 6d.

THE editor of this useful and popular monograph has added a chapter on the ligaments of the larynx, and has thereby placed the whole laryngological world in his debt. Truly Mr. Sutton may claim to have added a halo of interest to the study of joints and ligaments to the intelligent seeker of knowledge in this particular department; indeed, in it no small book has had so cordial a welcome since Wagstaff's "Osteology." The explanation of tendon formation is full of interest, and will continue to be of the greatest assistance in anatomical study. But the added chapter above referred to has the greatest call on our notice, not only because it is of exceptional interest to us, but also on account of its being presented here for the first time. It insensibly traces the primary use of the epiglottis from its intranarial state to the condition observed in man; nor is the lucid description of the evolution of the vocal cords or the regression of the false cords of less interest, and we sincerely congratulate Mr. Sutton on his work.

*R. Lake.*

## ANNOTATIONS.

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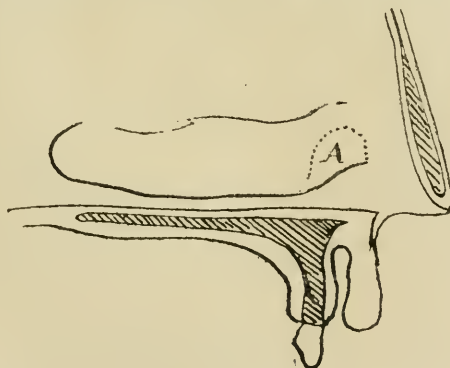
### A SIMPLE METHOD FOR PREVENTING THE DIMMING OF MIRRORS.

MR. GEORGE WALLIS, Dental Surgeon to the Central London Throat and Ear Hospital, recently drew the attention of his colleagues to a simple method of preventing the dimming of throat, dental, or other mirrors by the breath of the patient. It consists simply in rubbing the glass all over with a piece of ordinary dry soap. The film of soap left on the mirror is wiped off by means of a soft rag or handkerchief, and it is then found that the mirror can be breathed on without any cloudiness resulting. The observation, whether original or not, is not, however, by any means well known, and we feel grateful to Mr. Wallis for communicating it to us. No doubt its sphere of usefulness is somewhat limited, because where a succession of patients are passed in review, the necessary sterilization of the mirror by means of antiseptic liquid involves a repetition of the soaping, and, of course, if sterilization in the lamp flame is employed, the soaping process is unnecessary. It often happens, however, that it is inconvenient to have a lamp at hand for the heating of the mirror, as, for instance, where sunlight or electric light is used for illumination, and under these circumstances, especially if only one patient is to be examined, Mr. Wallis's process will be found of the utmost value. Those who wear eyeglasses or spectacles will in this process find a ready means of ridding themselves of the annoyance caused by the clouding of their glasses when they drink hot liquids.

*Dundas Grant.*

### REMOVAL OF THE ANTERIOR EXTREMITY OF THE INFERIOR TURBINATE AS AN ALTERNATIVE OF TURBINECTOMY.

THE main reason for bringing forward this treatment, which I have followed for some time with good results, is to suggest to the advocates of total removal, the advantage in a large number of these cases of nasal obstruction from inferior turbinal hypertrophy, of a conservative treatment; this has for its object the preservation



of the physiological uses the body normally possesses, and also the advantage of not precluding more radical measures.

The operation itself is simple, and can always be performed under cocaine anæsthesia, and can be done either by means of a strong pair of artery forceps, by punch forceps, or scissors and snare. The writer always uses the former. The accompanying figure shows diagrammatically the part of the bone removed. It is

frequently advisable to trim up the part by removing any small irregularities with punch forceps.

*R. Lake.*

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#### EUCAINE.

This local anæsthetic has received such laudatory notice that from the very nature of things one expects almost a rush of warnings and unfavourable opinions, and this is borne out by the appearance of such notes, by Scheppegeirell and others, transient ambliopia being quoted by one author in "The Journal," Feb., 1897, and in the epitome of a recent number of the "British Medical Journal" a further series of warnings are given. The writer had recently a case in which troublesome symptoms occurred, viz., vertigo, faintness, and a most distressing feeling of tightness across the chest; brandy, however, as is the case with cocaine, soon relieved the patient. But one cannot help feeling that it is better, however enthusiastic one may be, to be quite sure before giving to the general profession results which may prove fallacious.

*R. Lake.*

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### NEW PREPARATIONS.

COMPOUND PHENACETIN TABLOIDS. (Burroughs, Wellcome, & Co., Snow Hill Buildings, London, E.C.)

These tabloids are compounded on the same principle as were those of caffeine and antipyrin. We cannot naturally add anything to that already known about these drugs, but since phenacetin possesses an acknowledged tendency to cardiac depression the addition of caffeine will be often of great benefit.

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"BRANALCANE." (Jeyes' Sanitary Compounds Co., 43, Cannon St., London E.C.)

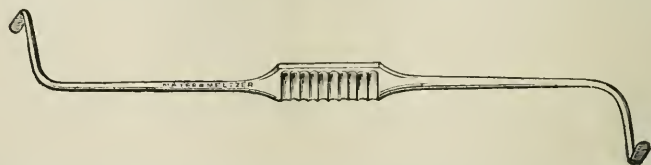
This compound, of which we have had a sample, is said to be made of boroglyceride and two non-poisonous antiseptic tar products. It is, of course, in the nature of a patent or secret preparation, and that alone precludes its use by us in the majority of the diseases and disorders which it is said to cure. From our limited tests (limited by the above-mentioned cause) we must express our opinion that branalcane is an unirritating antiseptic, and will be of great use as a household remedy for thrush and suchlike minor ailments.

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### NEW INSTRUMENT.

MASTOID ANTRUM GUIDE (DOUBLE). By R. LAKE, F.R.C.S. (Mayer & Meltzer, 71, Great Portland Street, London.)

This instrument is an improvement on my first antrum guide. The edges of the foot-plate are blunter, and the two instruments right and left are now com-



bined. The curve of the foot-plate is such as to fit it into the *iter ad antrum* when the handle of the instrument is held parallel to the zygoma.

THE  
JOURNAL OF LARYNGOLOGY,  
RHINOLOGY, AND OTOTOLOGY.

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**HYPERTROPHY OF THE LINGUAL TONSIL, AND ITS  
REMOVAL BY THE USE OF THE TONSILLOTOME.**

By A. J. BRADY, L.R.C.S.I., L.R.C.P.I.,

Honorary Surgeon Department for Diseases of the Ear, Nose, and Throat,  
Sydney Hospital, New South Wales.

THE abnormality which is generally spoken of as hypertrophy of the lingual tonsil should more correctly be designated hypertrophy of the lingual tonsils. When the adenoid tissue at the tongue base is hypertrophied, it will be found to consist of two masses, separated by a central division; so that each half of the mass is a separate and distinct structure, and can be removed without interference with its fellow. In this regard the rule of the development of the adenoid structure in the throat and nasopharynx is followed. Hypertrophy of the lingual tonsils occurs later in life than that of the pharyngeal or faucial tonsils. The youngest case of lingual tonsil hypertrophy treated by the writer was that of a girl aged fourteen years. Here both lobes were very successfully removed by the tonsillotome in two sittings. The hypertrophy is more frequent in the female than in the male sex, in the proportion of rather more than two to one. It is a true adenoid overgrowth, and not a mass of dilated vessels, as it has sometimes been described.

This condition has an important bearing on the methods of treatment. The idea that the hypertrophy was a vascular overgrowth has, no doubt, hitherto deterred surgeons from attempting its removal by a cutting operation. Although its true nature has before now frequently been described, the writer thinks it well to emphasize this point.

The following histological description of lingual tonsils removed by him has been kindly supplied by Dr. Sydney Jamieson, Hon. Pathologist to the Sydney Hospital:—

The tissue had already been in spirit some considerable time when

received by me, and so its naked-eye appearances had probably undergone a certain amount of change by shrinkage. In shape and size they resembled almonds, and in surface structure they presented an appearance exactly similar to that seen in the case of the faucial tonsil. On the surface there were numerous pits or invaginations of the outer tunic. On microscopic examination the mass was found to consist essentially of three structures :—

1. An outer lining of epithelium, which here and there was invaginated so as to form crypts similar to those found in the faucial tonsil.
2. Large masses of lymphoid tissue variously arranged.
3. A delicate fibrous reticulum, in the meshes of which the lymphoid cells were entangled and through which blood vessels and lymphatic spaces were interspersed.

I shall for convenience describe each of these parts separately.

#### (1) THE EPITHELIAL ELEMENTS.

Covering the whole of the outer surface of the organ was a layer of epithelium of fairly uniform thickness. The cells of this coating were disposed in three distinct layers.

(a) A layer of epithelial scales flattened and lying parallel to the free surface of the organ. The nuclei of this layer were almost rod-like in appearance, and the protoplasm of the cells was stained (in picro-carmin stained sections) of a light yellow colour.

(b) A layer of oval or rounded cells with prickle-shaped processes running between them. The nuclei of these cells were more or less rounded, and their chromatin fibres stained more deeply than those of the previous layer. Between these cells, here and there, were some multinucleated leucocytes, some of which contained a pigment resembling in appearance hæmatoidin.

(c) A layer of epithelial cells elongated in a direction at right angles to the free surface of the organ. The nuclei of these cells stained very deeply. This layer consisted of a single row only. This epithelial investment (consisting of the three layers above described) was found to be invaginated in places in the form of crypts. These crypts in some places almost penetrated the whole thickness of the organ. They were also found to branch at times in a dichotomous manner. The characters of the cells lining the crypts were exactly similar to those lining the free surface.

#### (2) THE LYMPHOID ELEMENTS.

The bulk of the mass was made up of this variety of tissue. In parts it was loosely scattered throughout the delicate strands of the fibrous reticulum. In other parts it was massed together in the form of ovoid or rounded clumps, resembling in appearance the structures in the spleen known as malpighian corpuscles. In these parts the cells were so closely packed together that the fibrous framework could not be discerned. Around the margins of these oval clumps there was a narrow space, having an appearance resembling that found at the periphery of a lymphatic gland. The cells of the lymphoid tissue were, for the most part, possessed of a single deeply-stained nucleus, but in some places (especially near the periphery of the ovoid clumps) they were multinu-

cleated. These cells seemed to be almost entirely made up of nucleus, the amount of protoplasm being very scanty, and forming merely a thin film around the margin of the cells. Scattered about among the cells lying in the fibrous reticulum were seen a few delicately formed blood capillaries.

### (3) THE SUPPORTING FRAMEWORK.

This consisted in the main of very delicate fibrils of connective tissue with fixed connective tissue corpuscles lying upon them. In parts the framework was almost completely obscured by the tightly packed lymphoid cells contained within them. Immediately beneath the epithelial layer running along the whole length of the organ, the fibrous network was of a much coarser structure, and in this part numerous blood vessels, crowded with red blood corpuscles, were seen, and between them large spaces containing multinucleated leucocytes, many of which were heavily charged with a golden brown pigment.

This description is not intended as an exposition of the pathology of hypertrophy of the lingual tonsil, but is merely on account of the changes found in the single specimen I have had the opportunity of examining. I hope, however, at a later date, to have the opportunity of still further investigating this interesting subject, and to report more fully thereon.

The most prominent symptom complained of is the sense of a foreign body in the throat: "Something that will not come up or go down." This leads to frequent swallowing movements. Frequently there is an irritating, hacking cough. Vocalists suffer from voice fatigue and breakdown. Several of the patients treated by the writer were singers, in whom no other cause could be found for their defect, the larynx being perfectly normal—yet there was a huskiness, a want of clearness of tone, and a constant vocal fatigue.

### TREATMENT.

The methods of treatment hitherto in use have been painting with solutions of iodine, the application of the galvano-cautery, the use of the cold or the galvano-cautery snare, and the application of chemical caustics. Painting, to have any effect, must be continued for a long time, and even then has little influence in reducing a well-marked hypertrophy. The galvano-cautery, while effective, requires repeated sittings, each of which is followed for days by a very sore throat, and it may, as has been pointed out by Dr. Felix Semon,<sup>1</sup> even give rise to dangerous inflammatory reaction. The cold snare is unsuitable, as the lingual tonsils are so dense and tough that they cannot be removed by this means without great difficulty. The galvano-cautery snare is open to the same objections as the galvano-cautery knife. The use of chemical caustics need only be mentioned to be condemned, as it is impossible to limit their action to the desired region.

In October, 1892, the writer, for the first time, removed hypertrophied lingual tonsils with the tonsillotome. On this occasion the ordinary small Mackenzie's tonsillotome was used. Finding some difficulty in using a straight instrument in this region, the writer had a curved one

<sup>1</sup> "International Centralblatt für Laryngologie," etc., Oct., 1893, page 223.

constructed on his design by Mr. Hentsch, surgical instrument maker, Sydney. This instrument is made on the lines of Mackenzie's tonsillotome, but the shield is curved on the arc of a circle; and to enable the blade to follow this curve it is also slightly curved short, antero-posteriorly, and connected with the driving shaft by a neck of spring steel. This instrument is much easier to use than the straight one. It is a first attempt to overcome a difficulty, and may be improved upon. Already Mr. Lennox Browne has proposed a modification.

#### CASES SUITABLE FOR TONSILLOTOMY.

Since 1892 the writer has treated, in his private practice, one hundred and eleven cases of enlargement of the lingual tonsils. Of these thirty-four were subjected to tonsillotomy, twenty-three had applications of the galvano-cautery, and fifty-four were treated by palliative measures—mainly by applications of Lugol's solution. The hospital statistics are not included, as it is only lately that suitable instruments for tonsillotomy were provided.

Many of the cases amongst those treated by palliative measures were suitable for tonsillotomy, but for various reasons the patients either would not, or could not, at the time, submit to radical treatment. The galvano-cautery was only used for scattered nodular enlargements on the tongue base, and has been used with decreasing frequency of late years. Tonsillotomy will be found to be the best means of dealing with all large and distinct hypertrophies which project in a bilobate fashion from the tongue base. The tonsillotome can also be applied in some cases for the removal of less marked nodular rough projections. For diffuse thickening, accompanied by catarrh, palliative treatment is suitable. In the experience of the writer, iodine solutions have little or no effect in removing marked hypertrophies. In several hospital cases, after months of local paintings, the growth, in the end, has had to be removed with the tonsillotome.

The operation is done after the local application of cocaine, under the guidance of the laryngeal mirror. It is best to remove only one lobe at a sitting, and when this side has healed the other can be dealt with. Thus a clearer view is got for the removal of the second lobe, unobscured by blood, and should any after-bleeding take place it will be easier to control, if from only one side.

In the experience of the writer, lingual tonsils removed by the tonsillotome bleed less freely than the faucial tonsils. Of the thirty-four cases treated in this manner, in all sixty-eight tonsils removed, after-bleeding occurred only once, and it was easily stopped by local astringents. The patient was afterwards proved to be liable to bleedings from small cause, such as extraction of teeth. Should persistent bleeding take place, it would be easier to control than a similar accident in the removal of the faucial tonsils, as the corresponding lingual artery could be tied. The advantages of tonsillotomy are that it more rapidly attains the end aimed at than any other means known to us; it is followed by less after-pain than other radical methods; it is free from the risk of after-inflammation; and it leaves a smooth surface, where the diseased tissues have been

completely removed. The one hundred and eleven cases are made up as follows :—Males thirty-four, females seventy-seven. Between the age of fourteen and twenty years, ten cases ; twenty to thirty years, sixty-five cases ; thirty to forty years, twenty-eight cases ; forty to fifty years, four cases ; fifty to sixty years, two cases ; sixty to sixty-four years, two cases. One case of a large growth removed from one side of the tongue base turned out to be a sarcoma ; two years later there was extensive infiltration of the cervical glands. In one case of inflamed lingual tonsil an abscess was evacuated by incision. A remarkably sudden recovery of the singing voice occurred in one case. The lady had lost her singing voice for some years ; on the day following the tonsillotomy she found that she could sing. When seen lately, two years after the operation, she says the improvement continues.

In one case, where very large lingual tonsils were excised, the writer was disappointed to find the very disagreeable subjective sensations in the throat persisting : here the troublesome sensations were probably associated with the approach of the menopause.

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## REMARKS ON A CASE OF TABES DORSALIS, WITH LARYNGEAL CRISES AND LARYNGEAL VERTIGO.

By FRED. TRESILIAN, M.D., M.R.C.P. Edin.

THE following case is a good instance of the above, and one in which, being a tolerably early symptom, the laryngeal disturbance was the one for which the patient came to seek relief.

G. C., aged thirty, came first in September, 1895, complaining of attacks of choking cough for the last eight months, which came on paroxysmally and were very severe. The attacks were attended with giddiness, and in one or two of the later ones he thinks he must have fainted or lost consciousness. His description of an "attack" was, that it was ushered in by a tickling feeling in the throat, then one or two violent coughs, with whoops, which made him so giddy that he had to hold on to the nearest article for support, after which he felt choking, and could not get his breath in. Sometimes, out of doors, he had to hold on to the nearest railing until the attack passed over ; and one day lately he had an attack whilst knocking at a door, obliging him to hold on to the knocker with both hands, when, unfortunately, the door was opened and he staggered and fell into the hall. He is sure he distinctly lost consciousness for a few moments. The attacks last for one or two minutes, and have been coming on more frequently of late. His own impression was that the disease was whooping cough. He also stated that he suffered very much from weakness and a tired feeling in his legs, and that when walking, either leg would suddenly give way, and almost throw him down. In addition, he had more difficulty in walking in the dusk or in darkness. He also had severe pains in the legs, which came on suddenly, lasted for a few minutes, and then passed away. He de-

scribed them as "screwing pains, like the toothache," in his thighs and calves. They frequently came on at night, and obliged him to get up and rub himself. He had been subject to these pains since an attack of influenza three years ago, and it was to this that he attributed them.

I found absence of kneejerks on both sides, loss of the pupillary reflex to light, and slight but distinct ataxy. There was no alteration in the voice, no stridor in sleep, and no dyspnœa on exertion.

This group of symptoms and signs readily showed that the disease was tabes, and that the attacks of cough were laryngeal crises.

On examining the larynx nothing abnormal could be seen, the vocal cords moving perfectly. I therefore thought the attacks arose from adductor spasm, which, with the consequent closure of the glottis and violent cough, was the cause of the vertigo and loss of consciousness, the cause being an irritation of the nuclei of the spinal accessory nerve. He remained under my observation until April 7th, 1896, and during that time there was no evidence of any abductor paralysis.

On questioning him further, I found that he had contracted syphilis six years previously. He said that his bowels acted capriciously—sometimes loosely, sometimes costively. Micturition was normal, but he had to go quickly, as, when the desire came on, he could not retain his urine. There was no evidence of anæsthesia anywhere, nor was sensation anywhere delayed, and his sensations of heat and cold were normal. The muscular contractility of the vasti was normal.

I ordered him iodide of sodium with belladonna and antipyrin, and nitrite of amyl for the cough.

The subsequent progress of the case was as follows :—

October 28th : He has had a most severe attack of diarrhœa, with light-coloured motions, for ten days, with some abdominal pain and a constant feeling of something in his rectum, attended with a desire to defecate. His cough was better, and he had had but one attack lately, that not being a bad one.

November 8th : He complained of his sight, and I found well-marked optic atrophy equally advanced on both sides. He said that while the diarrhœa had been on, the cough had been much better. The larynx was normal and there was no anæsthesia anywhere. He developed a good-sized wart on the penis, behind the glans, which disappeared after a few applications of acid nitrate of mercury. He says he experiences a difficulty in emptying his bladder thoroughly at one sitting, and can only do so when seated on a closet ; further, that he has to run quickly when his bowels want to act, as he cannot retain his motions.

November 12th : Has had another attack of diarrhœa. Double ptosis has developed. His cough has almost entirely disappeared.

January 25th : The loss of sight has been progressive, the vision being now very imperfect in O.S. Ptosis still present, but not complete, and is most marked on the left side.

February 25th : The vision has become worse. O.S. almost blind. The cough has again been troublesome. The larynx is normal on examination. He had severe pains in his legs for one day lately.

April 26th : He is now blind in both eyes.

The laryngeal symptoms present in this case were interesting, and of a nature peculiar to tabes. The crises were well marked, and appeared among the earlier symptoms. The more usual abductor paralysis (especially of the left vocal cord) was absent, and the form taken was that of spasm of the adductors and of the tensors of the vocal cords, both superior and recurrent nerves being involved in the attack. The association with giddiness in this case goes largely to support Dr. McBride's theory of laryngeal vertigo, which is the one now generally received, *i.e.*, that it is due to forced expiratory efforts made when the glottic aperture is closed. How the vertigo is actually excited by the effect this produces on the equilibril centres in the cerebellum is uncertain, it being a question whether there is undue congestion or undue anæmia, or as to why the equilibril centres should be especially affected by the process more than other cerebral centres. The general effect on the brain must be a strong one, as some cases have ended fatally by asphyxia, and the attack of vertigo is attended by loss of consciousness, which, however, is quickly recovered from on the cessation of the spasm. As to whether death, in some cases, was not due to a profound effect on the cardiac or respiratory centres is hard to decide. Gowers says that "the only direct effect of the malady (tabes) which has ended life is laryngeal spasm, or "paralysis."

Laryngeal crises are in themselves both a motor and sensory symptom of tabes, and rank with other manifestations that are transitory and not permanent. They may be classed with ptosis, external strabismus, and in some cases with lightning pains and gastric or other visceral crises, which do not always last through the whole course of the disease. The cause must be an irritation of the nuclei, and not a degeneration such as that which affects the nuclei or trunks of the fifth, optic, or auditory nerves, in which the effect produced remains the same to the end. That this is so is proved by the fact that in many cases it completely disappears, while in some, as in the one under consideration, it almost completely does so. A similar condition must occur in the nuclei of the vagus in gastric crises, and in the third, fourth, and sixth nerves in the various external affections of the muscles of the eyeballs. In the case of the auditory nerve, many cases have been recorded in which there has been a defect in the power of hearing certain sounds in the scale, a limitation of the range of audition analogous to that of the field of vision in commencing atrophy of the optic nerves.

Vertigo, apart from that of laryngeal causation, is not common in tabes, whereas the opposite is usual in cases in which there is more or less disturbance of the function of the auditory nerve. The transient palsies of cranial nerves chiefly occur in cases of tabes of syphilitic origin, and possibly the same may be said of the laryngeal complications.

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## SOCIETIES' MEETINGS.

### THE LARYNGOLOGICAL SOCIETY OF LONDON.

*March 10th, 1897.*

HENRY T. BUTLIN, Esq., F.R.C.S., *President.*

*Pharynx from a Case of Scarlet Fever, Fatal on the Ninth Day of Disease, that had been Treated with Antistreptococcic Serum.* Shown by Mr. KNYVETT GORDON.

The specimen showed sloughing of both tonsils, and ulceration of the uvula. There was a chain of small ulcers, extending from the tip of the epiglottis to the pyriform fossa on each side; the naso-pharynx had been full of sloughing adenoid tissue.

He stated that, in his opinion, the serum was not of much value in cases of scarlet fever where the septic symptoms appeared late, and were due to absorption from the sloughing throat or neck; but he had obtained a strikingly good result when there was septicæmia at the onset, and the serum was given early.

Cases shown by H. LAMBERT LACK.

Case 1: Man, aged sixty-five, nearly two years after operation for sarcoma of the nose.

The patient was treated for eighteen months for nasal polypi of the left nostril only, when, in February, 1895, for the first time an ill-defined swelling was noticed in the middle fossa on the right side. In April, 1895, the man was again seen; the right nostril was then almost blocked by a soft, easily-bleeding, superficially necrotic mass, springing apparently from the middle turbinate.

Removal of pieces with the snare was accompanied by severe hæmorrhage, and the mass increased rapidly. Microscopical examination of these pieces confirmed the diagnosis of sarcoma. The patient was admitted into hospital for operation in May, 1895. Under chloroform the posterior nares were securely plugged with a roll of lint, held in position by tapes passing through the nose and tied round the head. The right ala nasi was detached to permit of freer access. The mass was seized with polypus forceps and torn out. Then, by vigorous use of a Meyer's ring knife, the greater part of the lateral mass of the ethmoid was scraped away, the inner walls of the maxillary antrum and of the orbit being almost entirely removed. The roof of the cavity was also very freely scraped away. The large cavity was packed with iodoform gauze, and the post-nasal plug withdrawn. The operation was followed by considerable ecchymosis of the eyelids and cheek, but the patient made an otherwise uneventful recovery, and left the hospital in fourteen days. There is now, nearly two years later, no sign of recurrence of the disease, and there is no deformity of the nose.

The case is an illustration of the mild malignancy possessed by these growths, and of the success which in consequence often attends vigorous intranasal treatment.

Case 2: Man, aged forty-five, with cyst of epiglottis and black tongue. The patient complains of a lump in the throat and of choking sensations, causing great discomfort, especially on swallowing. Examination shows two rare conditions. There is a cyst about the size of a horse-bean in contact with the epiglottis, but apparently springing from the right side of the glosso-epiglottic ligament. This probably gives rise to the above symptoms. There is also the typical condition of black tongue. The papillæ lying immediately in front of the circumvallate papillæ and extending forwards in the centre of the dorsum are greatly elongated, furry-looking, and sooty black.

This condition has persisted some years, varying much in amount and extent, and apparently gives rise to no symptoms.

Dr. STCLAIR THOMSON asked for, and Mr. BUTLIN suggested, the advisability of a microscopic examination of the "black tongue" fungus.

*Case of Anterior Turbinotomy in an Elderly Man.* Shown by Dr. GRANT.

This patient complained of discomfort in the throat with congestion of the fauces, pharynx, and larynx. He had almost complete nasal obstruction, and as the application of topical remedies failed to produce any effect upon the throat, I decided to remove the nasal obstruction.

The anterior extremities of both inferior turbinated bodies were removed. A cut was made by means of the scissors, obliquely upwards and backwards along the attachment of the turbinated body. A cold wire snare was then passed around the peninsula thus left, and the portion ensnared was easily cut through. An opening was thus made into the wide part of the inferior meatus, and breathing through the nostril became very easy.

The loss of blood was quite insignificant. The patient had no signs of constitutional reaction, and as far as the nasal obstruction was concerned was completely relieved. The discomfort in the throat was also considerably diminished.

*Case of Anterior Turbinotomy in a Female.* Shown by Dr. GRANT.

Patient is a vocalist, and suffered from nasal obstruction. This was greatest in the left nostril, and I removed the anterior extremity of the inferior turbinate by the same method as in the preceding case. The bleeding was slight, and the breathing room thus afforded was ample. The other nostril now seemed by contrast to be obstructed, and I removed the anterior extremity of the right inferior turbinate.

The appearance after recovery is that of a double passage, the posterior half of the turbinated body forming an imperfect vertical septum, while the amount of the turbinate left is presumably sufficient for all purposes.

In many cases it might be substituted for the complete turbinectomy.

Dr. WILLIAM HILL thought that there was still some obstruction, and suggested complete turbinectomy. In this Dr. SCANES SPICER supported him.

Dr. HALL and Mr. BABER pointed out the advisability of only doing as much as was necessary, especially when the obstruction was confined to the anterior extremity of the turbinate. The hæmorrhage in the anterior operation is slight—in the complete turbinectomy often severe.

*Case of Functional Aphonia with Ventricular Band Phonation.*  
Shown by Dr. GRANT.

Miss—, aged thirty-six, has suffered from hoarseness since December, 1890. She lost her voice suddenly, and for four or five months could only speak in a whisper. Then she consulted a doctor, who cauterized her throat on several occasions. The voice returned partially, but it was very gruff, and has remained so since.

She has had purulent rhinitis affecting various sinuses—ethmoidal particular—accompanied by frontal, post-ocular, and occipital pain. Both frontal sinuses were explored by me, but with comparatively negative results, and no pronounced benefit from the exploration.

The ethmoidal sinuses have been opened, but the nasal trouble is still under treatment, and likely to continue so for some time.

The vocal trouble depends upon an incomplete approximation of the vocal cords—especially in the posterior third—while the ventricular bands come into apposition in the anterior three-fourths of their length.

Sounds produced on phonation are extremely gruff and low pitched. After vigorous faradization of the interior of the larynx, and a considerable effort at imitating normal sounds, the patient can utter vocal sounds of some purity, and the laryngoscope shows the vocal cords approximated, while the ventricular bands retain their normal position. This soon passes off. Under daily stimulation the acquisition of the normal tone becomes more easy, and its disappearance less quick.

There is slight deafness on the right side. The field of vision is reduced, and there is complete hæmianæsthesia of the right side.

The hysterical nature of the affection is probably unquestionable.

Dr. SPICER thought that phonation was damped by the contraction of the pharyngeal muscles.

Mr. SPENCER said that expiration did not coincide with adduction in this case.

Dr. THOMSON noticed that the patient could cough without the vocal processes coming together, and thought that some of the "gruffness" might be due to thickening of one of the vocal cords.

*Case of Double Abductor and Tensor Paresis in a Tabetic Subject.*  
Shown by Dr. GRANT.

The patient, an elderly man with marked tabes, has suffered from hoarseness for two years, followed after five months by the occurrence of slight inspiratory stridor.

When seen two years ago his vocal cords were, during inspiration, hardly abducted at all, but they were slightly more open than during phonation. His palate during phonation was drawn up to the left, and there was no dimple on the right side. The orbicular muscle of the mouth was feeble; he could neither whistle nor spit, but his tongue moved fairly well, and he could make a channel with it.

His swallowing and his pharyngeal reflexes were normal. He was known to make considerable noise in his sleep.

He has frequently had diplopia; his knee-jerks are gone; he has shooting pains in his legs; is unable to chew owing to want of power and pain in the process, and food accumulates between the teeth and the cheek.

Now he complains of a tightness in the throat, and the stridor in inspiration is very little worse than it was two years ago, although his ataxy has increased very considerably.

His epiglottis is very pendulous, and he appears to have no power of lifting it, so that the movements of the vocal cords are hardly perceptible until Mount Bleyer's epiglottis lifter is used; then during inspiration the vocal cords adhere together in their anterior fourth. There is a very wide elliptical opening from this point to the vocal process. These projections are separated by two or three millimètres, and behind them the cartilaginous glottis is very angular in shape.

The outward movement of the cartilages of Santorini is very slight in phonation, the vocal processes coming close together, and the elliptical opening between the vocal cords becoming somewhat narrower.

The sensibility of the larynx is slightly diminished, and the voice is monotone.

There appears to be paralysis of the abductors and of the tensors of the vocal cords, both internal and external. Were it not for the latter element the dyspnoea would be considerably greater than it is, and tracheotomy would have been more urged than has been the case.

Dr. SEMON related the details of a similar case of tabes, where double abductor paralysis, without any warning, suddenly placed the patient in a condition of almost complete asphyxiation, and only a rapid tracheotomy with three hours' artificial respiration rescued the patient from death; and this case had been the main cause of his advising tracheotomy in similar cases before such acute symptoms appeared. He now thought, however, that in some cases where the paralysis was not so complete, the risks should be clearly laid before the patient, and that tracheotomy might sometimes be deferred.

Mr. CRESSWELL BABER asked if there was any hyperæsthesia of the pharynx and larynx, as he had under his care a case of abductor paralysis in locomotor ataxia in which there was hyperæsthesia together with attacks of spasm of the adductors.

Dr. GRANT also showed a case of chronic œdema of larynx in a boy aged fifteen, and a case of complete occlusion of the right posterior naris.

#### *Case of Chronic Laryngitis.*

Dr. BALL showed the case of a clergyman, aged twenty-six, otherwise healthy, who had suffered from hoarseness and weakness of voice for about five years. The voice is more husky when speaking in a low tone than when he raises his voice. The vocal cords are congested, and on phonation they are not completely approximated, an elliptical opening remaining between them in front of the vocal processes. He has derived no benefit from treatment hitherto, and the question is

what is the cause of the condition of chronic laryngitis and defective tension, and what treatment would be most likely to benefit him?

Dr. HALL said that the patient complained of a dry throat and that there was inefficient nasal respiration, which if corrected might tend to relieve the laryngeal condition. This suggestion was supported by Dr. SPICER, who considered the nasal obstruction very complete.

Dr. BALL, in reply, said that the galvano-cautery had been applied to relieve the obstruction, and possibly more would be done, *e.g.*, anterior turbinotomy. There was imperfect action of the internal tensors, and Dr. Semon had suggested internal faradization; but it was a lengthy and tedious treatment, and he (Dr. Ball) thought that massage and voice training might be of advantage by exercising the muscles.

*Double Abductor Paralysis with New Growth at Base of Tongue.*  
Shown by Dr. STCLAIR THOMSON.

This man, aged fifty-seven, was a patient of Dr. Bond's, who had kindly lent the case. The patient had attended the Throat Hospital twenty-seven years ago, under Morell Mackenzie, for noisy breathing consequent on being stabbed about the neck; and at first it was thought that the patient's description of his case probably referred to the commencement of this double paralysis, which would in that case have existed for twenty-seven years. But it appears that the case was published in the "British Medical Journal," December 24th, 1870, p. 682, and a reference to that journal shows that at that date the affection was limited to one side, and was recovered from. The following is the description of his condition in 1870, six weeks after being stabbed: "Four nearly healed wounds were found in the following situations: one just below the prominence of the occiput; a second over the right side of the second cervical vertebra; a third just below and a quarter of an inch behind the mastoid process (this wound was stated in evidence to have been one inch and three-quarters deep); a fourth wound was situated about midway between the second and third. On examination further, there was seen to be paralysis of the right side of the tongue, and slight paralysis of the muscles of the upper jaw on the right side. There were diminished sensibility and loss of power of the abductors and adductors of the right side of the larynx, and considerable enlargement of the thyroid body. No special treatment was adopted, and the patient is now nearly well. Dr. Morell Mackenzie observed that in this case the loss of sensibility of the mucous membrane, the impaired action of the muscles on the right side of the larynx, and the dysphagia, all pointed to an injury of some fibres of the pneumogastric, as it is only by injury of the trunk itself that both the motor and sensory branches could be affected. The paralysis of the right side of the tongue clearly showed injury of the hypoglossal nerve. It was difficult to account for the apparent paralysis of the temporal and masseter muscles, unless it were that this condition had been caused by some tumefaction and stiffness of the articulation of the jaw. As the man had not been seen by Dr. Mackenzie at the time of the accident, the account as to heat of the face could not be entirely relied on, and might possibly have been

“ due to inflammatory hyperæmia. There did not appear to have been any affection of the pupil, though the eyes had been suffused with tears. The sudden enlargement of the thyroid body did, however, in conjunction with the other symptoms, seem to imply that there had been injury of some branches of the superior cervical ganglion.”

Although the above report states that the patient was “nearly well,” he himself asserts that since the year 1870 he has never been free from stridor on the slightest exertion ; he cannot lift a weight or hurry without dyspnœa. This is now found to be dependent on very complete double abductor paralysis. The cords, indeed, are so flaccid that on deep inspiration they fall together, while on expiration they flap apart. Is this paralysis in any way connected with his condition as published in 1870, or is it not rather a separate process caused by syphilis, which he contracted about two years previously to the stabbing accident ? The pupils are equal and react normally ; the patellar reflexes are normal. The patient says his breathing has been better in the last ten years than it had been formerly, and he does not now apply for this, but because of pain in the throat and a lump at the angle of the jaw. There is a small, hard, ulcerated infiltration at the right base of the tongue and on the neighbouring surface of the anterior faucial pillar. There is an enlarged and tender gland at the angle of the jaw. He has been put on iodide of potassium, but the condition of the tongue is suspicious of malignant disease.

Mr. BUTLIN said that the tumour at the base of the tongue did not look like carcinoma, and was possibly a tertiary lesion.

Dr. SEMON pointed out that the late Sir Morell Mackenzie, in his description of this case, had only spoken of paralysis on the *right* side of the larynx, whilst at present there could be no doubt that there was *bi-lateral*—and, indeed, very complete—abductor paralysis. The explanation, probably, was this : according to Mackenzie’s description the *pneumogastric* nerve had been injured ; hence, probably, an ascending neuritis had occurred, the affection had extended from the vagus nucleus to the nucleus of the spinal accessory in the medulla, from the latter through the commissural fibres (which, according to Lockhart Clarke, connected the two accessory nerves), to the left accessory nucleus, and had then travelled downwards the trunk of that nerve, causing abductor paralysis on the left side as well. (Sir George Johnson’s theory.) In view of the fact, however, now communicated by Dr. StClair Thomson, that the patient had had syphilis prior to the infliction of the injuries, it was, of course, also possible that all the various nerve lesions met with in this case might be the result of cerebral syphilis.

*Case of Subglottic Tumour with a History of Aphonia of Twenty-two Years.* Shown by Dr. DONELAN.

The patient, a woman aged thirty-three, was seen on December 18th, 1896. When eleven years old she had an attack of acute laryngitis, and her voice, previously clear, became the rough whisper it is at present. She has enjoyed good health, and even when she has had severe colds there has been no dyspnœa.

On examination a subglottic growth, probably a soft fibroma, was found to be the chief cause of the aphonia. The left arytenoid body passes slightly in front of the right in adduction, and to such an extent that the left capitulum completely crosses its fellow, especially when any extra attempt at phonation is made. The difficulty in approximating the right cord to the middle line would appear to be partially due to this condition.

The growth itself is about the size of a large pea, with the longer diameter antero-posteriorly. It is not pedunculated, but is so far mobile as to float up between the cords on any attempt at phonation. No removal has been made as yet. He thought the case of interest to the Society as showing how long growths of this class may exist without causing serious symptoms.

Dr. HERBERT TILLEY said that he considered it a case of soft fibroma, and that it should be removed endo-laryngeally.

Mr. BUTLIN suggested that the appearance seemed more like a papilloma, and advised removal of a portion of it at any rate.

Dr. HALL suggested the intralaryngeal snare for its removal; Dr. LAW, Stoerk's guillotine; while Dr. SPICER thought the growth had too large a base for the snare.

*Mucocele of Left Frontal Sinus after Operation.* Shown by Dr. BOND.

Patient is a female who had a swelling in the left frontal region for some years, with much pain in it on stooping forward, also pain in the left side of the nose and the left eye. There was tenderness on pressure and some "pitting" and redness where the swelling was most prominent. There was a history of a blow. The operation consisted of a vertical cut over the middle of the swelling, avoiding the supra-orbital nerve. A crown of bone was removed with the trephine, and the sinus opened with a chisel. It was full of thick mucus, and the nasal passage was blocked. This was made patent, the crown of bone replaced and the skin sewn up, the wound healing by first intention. The site of operation was selected where the bony thickening was most prominent. The patient has now no pain or deformity from operation.

Dr. STCLAIR THOMSON would like to have the opinion of members with regard to the occurrence of mucoceles in the accessory sinuses. Giralde's and Virchow had both shown that the term "dropsy of the antrum" was inappropriate, as it applied a false notion of the pathological condition. The fluid which distended the maxillary or frontal sinus was contained in a vesicle or cyst, and the mucus or "dropsy" was the contents of the distended and thin-walled cyst. Had anyone had experience of a sinus being simply distended by retention of the mucus normally secreted by its surface?

Dr. GRANT related a case of cystic distension of the antrum under his care.

Mr. BABER reminded the Society of the case of mucocele which he had shown earlier in the session, in which he operated radically; but granulations returned and filled the front nasal passage so that symptoms returned, and he then removed the whole of the front wall of the sinus

and the mucous membrane lining it. This cured the patient, but, of course, produced a considerable deformity.

*Case of Rhinitis Caseosa and Rhinolith.* Shown by Dr. WM. HILL.

Mrs. C. M., aged forty-two, came on February 4th of this year complaining of a blocked right nostril of five years' duration, accompanied by fœtor, headache, and deafness of the right ear ; the condition had come on gradually, and there was no history of an acute rhinitis or of syphilis. On examination the right nasal cavity was seen to be filled with a putty-like mass, which, on removal with a scoop, was found to be of the consistence of birdlime ; the nose was cleared of the caseous material, and it was then found that the septum was perforated, and that the nasal wall of the antrum, together with the inferior turbinal body, were absent, and that the caseous matter extended into the antrum. The floor of the inferior meatus was occupied by a hard body which was at first taken to be a sequestrum ; it was too large to be removed through the nostril : a portion of it was crushed and extracted with forceps. A week later the cavity of the right nasal fossa was again quite filled with caseous material ; this was removed, and the supposed sequestrum again crushed. The fragments presented the characteristics of a rhinolith. A week later recurrence of the caseous matter had taken place, though not so abundantly ; the remaining portion of the rhinolith was again crushed, and the whole of the fragments removed (two of the larger pieces were shown). For the last fortnight, under an antiseptic douche, the caseous deposit had largely diminished and the fœtor become less marked.

The middle turbinal region is now seen to be the site of exuberant granulations, and crusts are present.

Cases of rhinitis caseosa are rare, and the etiology of the condition is veiled in obscurity ; in recorded cases granulations have usually been present in the nose, as in this case, and bone lesions are not uncommon. According to Massei ("Archiv. Ital. di Laringol.," No. 2, 1896) three etiological elements are generally present, viz. : (1) an abundant purulent secretion ; (2) an obstruction to its discharge ; and (3) the presence of *streptothrix album*.

Whether in this case the rhinolith was a cause or consequence of the caseous rhinitis is a matter of speculation, though the latter is more probable. The history afforded no clue to the sequence of events in reference to the destruction of bone ; the one fact which could be positively stated, however, was that the caseous matter ceased to be deposited as the result of removal of the whole of the rhinolith together with antiseptic syringing of the nose.

Dr. LAW asked if there was a history of a foreign body, because he had had a case where there was a calcareous collection round a smooth bead.

Dr. GRANT mentioned a similar case to Dr. Hill's, where the nucleus was a piece of " blotting-paper " apparently.

## AUSTRIAN OTOLOGICAL SOCIETY.

*Meeting of 26th January, 1897.*Prof. POLITZER *in the Chair.*

(Translated and abstracted by Dr. DUNDAS GRANT.)

Prof. GRUBER. *On the Operative Treatment of Cholesteatoma in the Temporal Bone.*

This was a case in which Prof. Gruber had removed a cholesteatoma by means of the usual operation, and had prevented any evil effect from recurrence by the maintenance of a permanent opening in the mastoid region.

The patient was twenty-five years of age, and had suffered from a discharge since his sixth year. Fourteen days before he came into hospital he was attacked with fever, headache, noises in the ear, and a feeling of pressure in the neighbourhood of the left ear, with mastoid swelling. His temperature on entrance was 39°; his pulse 108. The external meatus was narrowed owing to a swelling of the postero-superior wall, and was filled with white masses of macerated epidermis. There was a fluctuating swelling over the mastoid process covered with livid skin. On incision through the soft parts over the mastoid a considerable quantity of fetid, broken-down purulent matter was evacuated, and a very small fistula was found in the middle of the exposed portion of bone, through which a probe could be passed into the deeper part. The cortex was chiselled away, and a cavity filled with cholesteatoma was opened, measuring three centimetres in depth and two and a half in width, which communicated through the antrum with the tympanic cavity. The dura mater and sigmoid sinus were exposed, free syringing was practised, and the wound was plugged with iodoform gauze. Next day the temperature was 38·5°, but the patient felt much better. On the third day the temperature was normal. The dressing was changed on the fourth day, and two days later the wound was perfectly clean, almost dry, and quite free from smell. After about six weeks the secretion of pus stopped entirely, and the patient was dismissed, with instructions to show himself from time to time. The cavity became covered with a cuticle, which remained dry, and could easily be pulled away, leaving a dry, whitish wall behind.

Prof. Gruber was of the opinion that in the case of small cholesteatomatous collections in the tympanum, and even in the antrum, all desired results could be obtained in the majority of cases by removal of the pars epitympanica. In the case of large ones in the mastoid there was absolute necessity for free opening of the mastoid process and the maintenance of the aperture. As regards the artificial papering of the cavity with cuticle, as recommended by Siebenmann, Prof. Gruber considered it both unnecessary and useless. In cases in which there was a

great tendency to the recurrence of cholesteatoma the tendency to healing was proportionately feeble, and the apertures remained open with very little trouble. He thought the cases in which such transplantations were likely to be of use were extremely rare.

Prof. POLITZER. *A Case of Cholesteatoma of the Middle Ear with Pyæmic Symptoms cured by Operative Opening of the Cavities of the Middle Ear.*

The patient was a woman aged thirty, who had suffered from otorrhœa of the right ear in childhood. On the 8th of November, 1896, there came on pain, followed next day by discharge from the ear. Five days later there were rigors, which were repeated several times during the following days. She was admitted into the hospital on the 24th November, when the meatus was found to be quite wide, almost dry, the membrane cicatricial, and above and behind an aperture of three or four millimètres in diameter, filled with epithelial masses, through which a probe could be passed to the aditus. The mastoid was normal externally, but there was tenderness on pressure over the region of the jugular vein. The tuning-fork gave evidence of obstructive deafness; whispered speech was heard at two-thirds of a mètre, and loud speech at two mètres. The rigors recurred in the evening and next morning, the temperature rising with them to  $40^{\circ}1$ ; therefore the operation was undertaken. The cortex was normal, and the mastoid bone much thickened. The antrum was opened, and in it there was a copious collection of moistened cholesteatoma and granulations. When the postero-superior wall of the meatus was chiselled through, the dura mater was exposed over an area of about the size of half a kreutzer. The tympanic cavity was opened; no ossicles were to be found. The granulations were freely removed. The osseous parts surrounding the sigmoid sinus were in part chiselled away and the vessel was exposed, pulsating distinctly for about half a centimètre. In the lowest part the wall was somewhat discoloured. The wound was washed out with a solution of creosol. The posterior cartilagino-membranous wall was slit up as far as the concha, and the flaps were stitched into the upper and lower parts of the wound. After the operation the temperature sank to  $36^{\circ}$ , and the patient was very comfortable on the whole of that day; but on the third day the temperature rose in the afternoon to  $40^{\circ}5$ , and after a rigor lasting half an hour cough and vomiting ensued. There was found next day a small patch of capillary bronchitis in the lower part of the left lung, but this disappeared a day later, and the temperature became normal. The subsequent course was typical.

Prof. Politzer was convinced that in this case death would have occurred from pyæmia in a short time if the operation had not been done. With regard to the question as to whether the opening in the mastoid region should be maintained, he is in favour of this being done, as it is in this way alone that the recurring collections of cholesteatomatous flakes can be removed.

Dr. GOMPERTZ had made use of Körner's modification of Panse's flap very enthusiastically when it was first brought to his notice, but on further

experience he had become less sanguine, as he had found several cases in which recurrence had taken place. On the other hand, he had found that the new-formed epidermis in cases in which a retro-auricular opening had been preserved was much stronger, owing, he believed, to the free access of the atmospheric air. He was, therefore, in favour of the retro-auricular opening as an assurance against recurrence.

Prof. URBANTSCHITSCH was of the opinion that the question regarding the maintenance or not of the mastoid opening was not yet settled.

Prof. GRUBER considered that in cases of small cholesteatoma the wound should be closed whenever it seemed certain that recurrent epidermic scales could be reached through the meatus; when large masses were present and the mastoid process was widely hollowed out, it was better not to close the wound. His experience was that in cases of very large cavities, however freely cleared out, closure did not readily come about, and the opening was easily maintained.

Prof. URBANTSCHITSCH had got even very large cavities to close.

Prof. GRUBER. *A Case of Fracture of the Temporal Bone caused by a Fall on the Head.*

Prof. Gruber showed the right temporal bone of a man aged thirty-one, who had fallen in the street while intoxicated, striking the right half of the face on the ground. Next morning he had severe pain in the head and bleeding from the right ear. He recovered consciousness in the afternoon and was brought to the hospital. There was no fever and the right facial nerve was paralyzed. There was ecchymosis of the forehead and the right auricle, and a copious flow of blood-stained fluid from the external meatus. After careful cleansing it was found that the meatus was narrowed and the membrane could not be seen, the soft parts of the passage being of a livid tint. On probing it could be felt that they were detached from the bone by hæmorrhagic effusion, a distinct perforation sound could be heard on inflation, and the watch was audible on contact. Bone conduction was increased and Weber's test was positive. There was a considerable flow of sero-sanguinous fluid out of the meatus, amounting in three hours to one hundred grammes, and the fluid was found on chemical examination to be cerebro-spinal. The treatment was antiphlogistic. The next day there came on severe rigors, vomiting, and somnolence, the right oculomotor nerve became paralyzed, but the fundus oculi was normal. Furious delirium and restlessness involved the removal of the patient to the mental wards, and he died two days later. On *post-mortem* examination there was found widely diffused meningitis. The dura mater was separated from the temporal bone on the upper and posterior parts by extravasated blood. The bone itself was fractured, and the fissure passed through the squamous, petrous, and tympanic portions, beginning at the lower third of the squamous portion, passing through the upper wall of the external meatus and over the upper surface of the petrous bone, from where the second fissure branched off so as to separate a quadrangular portion of the tegmen tympani of about 1·5 centimètres in length and 5 millimètres in breadth, which was attached to the other bones at the posterior and outer parts alone. The chief fissure extended

to the tip of the petrous bone, detaching this completely and extending to the lower wall of the external osseous meatus, which it completely broke through. In the membrane there was a semicircular slit about six millimètres in length, extending from below and in front upwards and backwards. The tympanic cavity was full of blood. A further investigation of the deeper parts of the bone would be made later on.

Dr. PANZER. *A Case of Radical Operation with Various Complications.*

A girl, aged sixteen, had suffered from otorrhœa of the left ear since childhood with frequent attacks of headache, which, since February, 1896, had become continuous, especially in the frontal and temporal regions. Along with this there were vertigo, darkness before the eyes, apparent rotation of objects, and occasional nausea. Two nights before the operation she awoke suddenly out of her sleep with loss of consciousness, cried out several times, and only came to herself after an interval of a quarter of an hour. On the 1st August, 1896, Dr. Panzer operated, according to what appears to be the typical Stacke's method. Two hours after the operation there was a weakness of the branches of the facial nerve going to the mouth, and in two days the nerve was completely paralyzed; this condition lasted for two months, after which it gradually diminished and disappeared completely. Six weeks after the operation the patient complained of pain in the auricle, which became hot, red, and swollen, with enormous œdema of the surrounding skin, extending to the cheek, the auricle swelling until it was the size of a child's fist. The temperature rose to 39·5. Burow's solution (plumb. acet. cum alum. acet.) was constantly applied, but produced little alleviation, the condition being obviously a perichondritis of the auricle. Several incisions were made on the posterior surface which evacuated small quantities of pus, but without leading to any diminution in the swelling. A large and deep incision was then made on the anterior surface, opening the abscess cavity freely, after which the swelling collapsed and the pain disappeared. The abscess was stuffed with iodoform gauze, the dressing was changed every day, and after six weeks the secretion of pus completely disappeared. The auricle shrivelled up and remained contorted and shrunken. The appearance in the operation-cavity was extremely favourable, the secretion became continuously less, the formation of granulations ceased, and there remained a perfectly smooth cavity, lined by a firm cicatrix without further secretion.

Dr. KAUFMANN asked if there were perforations of Shrapnell's membrane, and what part of the malleus was diseased.

Dr. PANZER replied that the appearance before the operation was that of a large perforation in the lower segment of the membrane, with considerable secretion of pus and granulation formation in the tympanic cavity, Shrapnell's membrane being absolutely intact.

Prof. POLITZER. *The Demonstration of some Rare Anatomical Varieties in the Organs of Hearing.*

The first preparation showed an extreme *extension of the jugular fossa*, and dehiscence between the posterior wall and the inferior section of the

Fallopian canal, three and a half centimètres in height and two and a half in breadth. The facial nerve lay exposed in the whole length of the dehiscence and only covered by the venous wall of the bulb. Very little reference has been made to such conditions in the literature of the subject (Zuckerkanndl). In such a case septic phlebitis of the bulb of the jugular vein would probably be complicated with paralysis of the facial nerve.

The second preparation showed a comparatively well-developed *band of connective tissue*, which originated at the attachment of the tensor tympani tendon to the manubrium, and from here ran in an oblique direction inwards and backwards to be inserted into the junction of the incus and stapes. From the mode of its insertion such a band must counteract to some extent the isolated or combined action of the tensor tympani and stapedius.

Dr. FERDINAND ALT. *Preparations showing the Effect of Caisson Pressure.*

These were derived from experiments upon animals, in which there were produced hæmorrhages in the middle ear, the cochlea, and the semi-circular canals, in rabbits, guinea-pigs, and dogs which had been exposed to an atmospheric pressure of four atmospheres.

Dr. VICTOR HAMMERSCHLAG. *An Apparatus for the Preparation and Preservation of Sterilized Pledgets of Wool.*

This was a glass case, with an accurately-fitting metal cover, and in which was a framework for the reception of one hundred glass tubes. Each tube was about five centimètres long, had a calibre of from 3 to 3·5 millimètres in diameter, and rounded at each end. The pledgets of wool were prepared with purified hands and twisted up between the fingers, then pushed into a glass tube by a rotatory movement, but only to such a distance that a small piece remained out so as to be easily seized by means of forceps. The whole apparatus is then placed in an ordinary dry sterilizer.

Prof. URBANTSCHITSCH. *A Case of Radical Operation, with unusually Favourable and Rapid Course.*

The patient was forty-five years old, and had suffered from otorrhœa in the right ear since childhood; under treatment it had ceased for some years, but the discharge had returned since summer. The patient complained of pain in the side of the head, giddiness, and darkness before the eyes.

On the 13th of November, 1896, the radical operation was carried out in the typical way, the membranous meatus being slit up in such a way that a considerable strip of the superior wall was transplanted into the antrum, the post-auricular wound being then stitched up. The dressing was not changed for eight days, and an endeavour was made to avoid the usual plugging, with such success that there was freedom from the usual growth of granulations and no quantity of pus. The cavity is now lined by a beautiful smooth cicatrix, and has been in this condition for three weeks.

Prof. URBANTSCHITSCH. *A Case of Subdural Abscess.*

The patient was thirty-eight years of age, and had suffered for six years with right-sided otorrhœa and attacks of giddiness, which he lost eight days previously, after the extraction of a polypus. The operation was carried out on the 28th of November, 1896. There was a comparatively small antrum filled with granulations. The dura mater was exposed and was torn in several small places, the cavity of the tympanum was filled with granulations, and there was caries of the ossicles. On the 30th of November there was severe headache, and on the changing of the dressing a large quantity of pus flowed from the uppermost part of the wound, the patient being thereby greatly relieved. As no recess had been left in the upper part of the cavity, there was no doubt that the pus had flowed from an abscess in the cranium, external to the dura mater. A ten per cent. emulsion of iodoform of glycerine was dropped into the wound so as to fill the cavity completely. This was done every second day for three weeks, and the secretion of pus gradually diminished till it completely ceased. At the same time the general condition of the patient greatly improved, and at the time of the report he was quite free from pain.

Prof. Urbantschitsch, in connection with these cases, referred to three others in which he had treated suppuration by means of iodoform. In one there was a tuberculous affection of the right ear, with a gravitation abscess in the pharynx; when pressure was made upon this, pus exuded in considerable quantity from the external meatus. The abscess was emptied by means of pressure, and the emulsion was poured into the meatus; then, by interrupted intermission of the pressure, the emulsion was sucked into the abscess cavity. Complete healing took place, and the patient died some months later of spinal caries.

In another case there was a granulation abscess which extended downwards from the mastoid process, along the sheath of the vessels between the carotid and jugular. A probe could be passed for a distance of six centimètres. In this case iodoform glycerine was used in the same way, with the result that complete closure of the sac took place; the patient was perfectly well when seen two years later.

In the third case there was a fluctuating abscess, and during pressure on the mastoid process the pus poured out behind the niche of the fenestra rotunda. The patient objected to an operation, and the iodoform emulsion treatment was prescribed with complete success.

Prof. URBANTSCHITSCH. *A Case of Injury of the Right Ear by a Revolver Shot.*

The patient, aged fifty-four, had on the 11th of July, 1896, fired two revolver shots against his right temple. He recovered consciousness in the evening, and his first sensation was that everything went round and round him in a circle. In addition he was conscious of noises and musical tones in the right ear, then of severe vertigo. When first seen the facial nerve on the right side was quite paralyzed and the hearing completely destroyed. The bullet could be detected through the meatus in the tympanic cavity, and a copious discharge of pus took place. On

the 23rd of October the posterior wall of the meatus was chiselled open, and the bullet could be reached in the tympanum, broken in several pieces; the largest part lay on the floor close to the anterior wall of the cavity in contact with the carotid canal, from which place it was removed with considerable difficulty. The promontory was driven in. The patient still remained under treatment, and a sequestrum had detached itself from the posterior wall.

*Dundas Grant.*

## SOCIETY OF LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY OF PARIS.

*President*—M. MARTIN.

From Dr. GEORGES GELLÉ's Report. ("Arch. Internat. de Laryng., Otol., Rhinol.," Jan. and Feb., 1897.)

Dr. P. LACROIX. *The Spontaneous Reduction of Septal Deviations by Removal of Obstruction present in the Opposite Nostril.*

A case is described in which the left nostril was completely obstructed by a large convex globose deviation of the anterior part of the septum, while the right nostril was also obstructed by a spur, mucous polypi, and polypoid hypertrophies of the turbinates. The right nostril was cleared in the usual manner. This proceeding was followed by a gradual but obvious return of the septum towards the vertical, so that the patient could ultimately breathe well through the left nostril.

In another similar case the removal of a spur and hypertrophied turbinate made catheterization possible in the opposite nostril, which was formerly obstructed by a deviated septum.

In answer to M. MARTIN the author stated that the whole septum was not deviated.

Dr. GEORGES GELLÉ. *Cerebral Complications (Pseudo-Meningitis) in the course of a Chronic Otorrhœa, Cured by Opening the Mastoid.*

(To be reported later.)

### DISCUSSION.

M. LUC related two cases bearing on the subject. In the first a Stacke operation, during which a small portion of dura mater was exposed, had been completed, and the cavity packed with gauze. On the fifth day after operation, without any elevation of temperature, the patient, a young man, was seized with general ectamsia followed by coma. No albuminuria or history of epilepsy.

After the coma had persisted for two hours the gauze was removed, and some foetid pus was found retained behind it. Nothing was done beyond cleansing the cavity, and next day the patient had recovered, and remembered nothing of the occurrence.

In the second case headache, somnolence, and coma occurred some days after an operation on the frontal sinus. Removal of a portion of

the posterior wall of the sinus, and incision of the dura mater, brought to light a small localized patch of pus on the pia mater. The frontal lobe was explored with negative result. The wound was washed with sublimate solution, and next day the fever, previously present, had disappeared and consciousness was completely restored, nor did symptoms of meningitis return.

M. LICHTWITZ. *Exostosis of the Pharyngeal Vault accidentally Removed with Adenoid Vegetations.*

The exostosis was situated high up, and had the form of a triangular crest, measuring a centimètre in length and half a centimètre in height. It was composed of normal spongy bone, and had no intimate connection with the adenoids. Somewhat similar cases have been described by Zuckerkandl, Scheff, Helme, and Roth, but they are undoubtedly extremely rare. The exact nature of the abnormality is altogether obscure. The explanation which falls in best with the present instance is to be found in a remark by Zuckerkandl: "The anterior tubercle of the atlas, " as well as the crest of the axis, are variable, being sometimes markedly " developed. These physiological structures may simulate a tumour of " the posterior pharyngeal wall." The pharyngeal tubercle may in this instance be the part interested, presenting an anomaly similar to that occurring in the tubercle of the atlas and axis.

M. LERMOVEZ considered one of M. Helme's cases mentioned was an exaggerated rostrum on the sphenoid.

Dr. COURTADE. *A Counter-Pressure Tongue Depressor.*

This is designed to meet cases in which the tongue resists the downward pressure. Under these circumstances an increase of pressure on the part of the surgeon necessitates the supporting of the chin. The instrument is a tongue depressor with a concave and broad tongue-piece, to prevent riding of the sides of the organ. In a slot in the handle a lever works about an adjustable axis, and to the distal end of this lever is fixed a crescent-shaped plate which fits the under surface of the maxilla.

After introduction of the instrument the handle of the lever is depressed by the thumb of the surgeon. In this way the tongue and jaw-bone are firmly gripped between two rigid plates, and not only is the tongue thoroughly under control, but the whole head can be turned about by the operator according to the requirements of the moment.

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April 10th, 1896.

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President—M. MÉNIÈRE.

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*A Case of Sclerosis of the Tongue of Influenzal Origin.*

M. COURTADE showed a case, apparently unique, in which the middle third of the tongue was of a wooden hardness. The condition followed an attack of influenza in a middle-aged patient, and took a

progressive course, spreading to the cheeks, etc. Iodide did not affect it. A case was also shown in which the tongue became atrophied and mammillated after an attack of influenza. No effect with iodide.

M. COURTADE also showed a *Small Canula for Intratympanic Syringing*. This differs from Hartmann's instrument, inasmuch as it is perfectly straight, and therefore cannot cause injury to the middle ear or membrane if the patient moves away the head. One or more openings are made at right angles to the axis of the tube. The author has employed this with success in acute cases of suppuration, sometimes even making use of paracentesis as a preliminary measure.

*Chronic Middle-Ear Suppuration with Repeated Inflammatory Attacks involving the Mastoid. Radical Operation.*

M. MALHERBE invited discussion on this case, in which cure followed the mastoid operation.

M. BOUCHERON remarked first upon the slight degree of resultant deafness, secondly upon the favourable character of this particular case. In tuberculous cases a rapid and brilliant result could not be expected.

M. MÉNIÈRE pointed out that the indications for radical operation must depend upon the risks of the operation. Patients were unwilling to accept these risks for the cure of a disease which often caused but little trouble.

M. MALHERBE considered that the surgeon was authorized to perform the radical operation in cases which resisted medical treatment, and should not wait for the appearance of serious symptoms.

*Note on a Case of Abscess of the Septum.*

M. HERCK's communication is reported in a previous number of the JOURNAL OF LARYNGOLOGY.

M. RUALT stated that in his experience of sixty or seventy cases, abscess of the septum was always the result of a blow giving rise to hæmatoma. He did not believe that sunstroke ever caused the trouble. He considered drainage ineffectual, and preferred to freely open the abscess and pack with gauze.

M. MÉNIÈRE agreed with M. Ruault as to the traumatic origin of hæmatoma. Twice he had obtained speedy cure by aspiration of the effused blood and subsequent plugging.

M. HERCK believed that abscess following exposure to the sun or to cold might be due to micro-organisms in the nose.

M. RUALT repeated that there was no abscess without hæmatoma and without infection.

M. BONNIÈRE'S paper on the *Theory of Hurst* was accepted. This will be reported later.

*Ernest Waggett.*

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ABSTRACT OF THE LETTSOMIAN LECTURES ON  
DISEASES OF THE NOSE AND THROAT IN RELATION  
TO GENERAL MEDICINE.

*Delivered before the Medical Society of London, February 1st, 1897,*

By F. DE HAVILLAND HALL, M.D., F.R.C.P.Lond.,

Physician to the Westminster Hospital, and Joint Lecturer on the Principles and Practice of Medicine in the Westminster Hospital Medical School.

*(Continued from page 210.)*

MYCOSIS FUNGOIDES.

ON April 10th, 1895, I showed at the Laryngological Society of London a man, aged fifty-two, suffering from mycosis fungoides. In addition to numerous tumours all over the body and limbs, tumours were seen on the posterior and lateral walls of the pharynx and on the left arytenoid cartilage. The patient had complained of more or less sore throat for eighteen months, but the speech was not affected. This was, I believe, the first case in which the larynx has been recognised as having been attacked by mycosis fungoides.<sup>1</sup>

RHEUMATISM.

Rheumatic affections of the nose have received but little attention. Freudenthal,<sup>2</sup> however, states that "a number of cases have come under his observation in which the symptoms of nasal rheumatism were distinct and unmistakable. Two varieties of the disease were noted — one with visible changes in the nose, and the other without such changes. The changes consisted of a swelling of the lower and middle turbinated bodies which obstructed the breathing, and which could not be reduced with even strong solutions of cocaine. In all the cases the pain in the nose was very severe, and all were associated with attacks of articular rheumatism affecting various joints in the body. In all of the cases, too, anti-rheumatic treatment was the only one which had any effect on the nasal symptoms."

The epistaxis which we occasionally see during the course of acute rheumatism is almost invariably due to the salicylate of sodium now so generally employed; at all events, I can find no reference to epistaxis among the symptoms of acute rheumatism in the pre-salicylate days.

In the naso-pharynx the only condition which seems at all dependent on rheumatism is lacunar inflammation of the third or pharyngeal tonsil.

Pharyngitis is a very common complication of acute rheumatism. It usually appears a day or two before the onset of the articular pain, but occasionally the throat is only complained of after the disease has fully declared itself.

<sup>1</sup> "Proceedings of the Laryngological Society of London," Vol. II., p. 70. "Clin. Soc. Trans.," Vol. XXVIII., p. 268.

<sup>2</sup> JOURNAL OF LARYNGOLOGY, 1895, p. 179.

On examination the margin of the soft palate, the tonsils, and the posterior wall of the pharynx will be found of a deeper red colour than normal, and somewhat swollen. Occasionally there is œdema of the mucous membrane, more especially of the uvula. Freudenthal<sup>1</sup> describes a benign ulceration of the pharynx, which he has only met with in persons affected with chronic rheumatism, and which promptly disappears under anti-rheumatic remedies. The rheumatic origin of tonsillitis in many cases is now fully recognised. Lacunar tonsillitis is the form which usually occurs in connection with rheumatism. It must be borne in mind that though cardiac lesions are seldom seen when sore throat is the chief feature of a rheumatic attack, still cases do occur in which endocarditis and pericarditis are met with, even when articular pains are entirely absent. In the discussion on tonsillitis at the meeting of the British Medical Association in 1889, I described a typical example of this.

From its exposed condition, both externally and internally, and from the amount of fibrous tissue which enters into its structure, it might have been thought that the larynx would be especially subject to rheumatic affections. This, however, does not seem to be the case, and it is only comparatively recently that attention has been directed to the occurrence of a rheumatic laryngitis. Morell Mackenzie, for instance, whose text-book represents the high water mark of knowledge of throat diseases extant at the time, though he mentions "rheumatic sore throat," says nothing about rheumatic affections of the larynx, except the remark that it is probable that ankylosis of the crico-arytenoid joint may be due to primary synovitis, either rheumatic, gouty, or simply catarrhal. I have no doubt in my own mind, however, that in the past many cases of the kind have been misinterpreted; indeed, on looking back through my casebook I have found cases which I should now class among rheumatic affections of the larynx, but which formerly I did not recognize as such. For instance, I have noticed in patients subject to other rheumatic manifestations swelling of one or both ary-epiglottic folds accompanied with considerable pain in swallowing and some external tenderness, which have speedily yielded to an anti-rheumatic treatment. If the case proceeds a little further the crico-arytenoid joint becomes involved, and there may be impairment of movement in the corresponding cord.

There is one class of affection of the throat in which, though the evidence of connection with rheumatism is somewhat weak, I nevertheless think that rheumatism plays an important rôle; I refer to cases of fixation of a vocal cord from ankylosis of the crico-arytenoid joint. In my book on "Diseases of the Nose and Throat," page 361, I recorded two cases which came under my observation. It would, perhaps, be more correct to place these cases in the class of arthritis *a frigore*; but the line of demarcation between an arthritis arising from exposure to cold and that due to rheumatism is a very narrow one.

If articular rheumatism of the larynx is associated with rheumatic affections of other parts of the body the diagnosis is easy, but if the larynx alone is affected it is extremely difficult to say positively that the

<sup>1</sup> *Loc. cit.*

<sup>2</sup> "Brit. Med. Journ.," 1889, Vol. II., p. 588.

affection is really of rheumatic origin. In rheumatism of the crico-arytenoid joint the patient complains of an uncomfortable sensation at the angle of the jaw, usually relieved by pressure, which frequently elicits crepitus; the pain is increased by swallowing. Swelling round about the joint may or may not be present. Swallowing is generally easy at first, but dysphagia comes on later. The cord usually becomes fixed in the cadaveric position. Dr. A. E. Garrod<sup>1</sup> quotes three cases.

Dr. E. F. Ingals,<sup>2</sup> of Chicago, believes that laryngeal rheumatism is often mistaken for neuralgia. He finds it to occur most frequently in men, and most commonly during spring and autumn. Nearly all subjects are of the rheumatic diathesis. The pains come and go in the manner characteristic of rheumatic affections, and they are benefited only by those remedies and surroundings which have proved most useful in rheumatism. Before leaving the subject of rheumatic laryngitis, I should like to add that cases of affection of the crico-arytenoid joint from gonorrhœal rheumatism have been recorded. Even if there were no cases reported we might reasonably expect that they had occurred, but had been overlooked, as we know that gonorrhœal rheumatism may affect any joint. Dr. Lacoarret,<sup>3</sup> in his very interesting paper on acute arthritis of the crico-arytenoid joint gives two cases.

In connection with impairment of movement of vocal cords comes the question of rheumatism of the laryngeal muscles. I am not myself a believer in the rheumatic origin of muscular affections generally. I am of opinion that they are more often due to a gouty tendency. I cannot therefore give in my adhesion to the view that the muscles of the larynx may be affected with rheumatism and give rise to impaired movement of the vocal cord, and I agree with Dr. Semon when he says that "I believe the less in rheumatic paralysis the greater my experience becomes."

#### GOUT.

I have but little to say in reference to gouty conditions of the nose. Tophi are sometimes found in the skin of the nose; at the time of writing this, I have a patient in the Westminster Hospital with a large tophus in the skin of the nose.

Sir Dyce Duckworth<sup>4</sup> states that "painful follicular inflammation in the alæ of the nose have been noted with some frequency in the gouty. These do not suppurate, but are apt to recur again and again."

If epistaxis occurs it is usually as a result of changes associated with chronic interstitial nephritis (the gouty kidney), rather than directly due to any gouty condition.

In a letter to me on the subject, Sir Dyce Duckworth confirms an opinion which I have long held, that "some nasal catarrhs are gouty, sudden, and sometimes fugitive." There is much to be said in favour of the view that in some cases of hay fever there is an underlying gouty tendency. I have not, however, found hay fever alternating with or replacing an attack of gout.

<sup>1</sup> "A Treatise on Rheumatism," p. 82.

<sup>2</sup> "Sajous' Annual," 1889, Vol. IV., g. 4.

<sup>3</sup> "Revue de Laryngologie, d'Otologie, et de Rhinologie," 1891, p. 337.

<sup>4</sup> "A Treatise on Gout," p. 90.

Sir Dyce Duckworth quotes Noël Gueneau de Mussy as being of opinion that cases of hay fever were especially frequent in members of gouty families, and as regarding the changes in the mucous membrane of the nasal passages as akin to the eruptions which vex the skin of gouty subjects.

Whilst on the subject of hay fever and paroxysmal sneezing in the gouty, I will take the opportunity of emphasizing the importance of a thorough investigation of the patient's general condition before any local treatment is carried out in the nose for these affections. A careful inquiry should be made as to the state of the various functions of the body, especial attention being directed to the condition of the liver and kidneys. The possibility of malarial infection should also be considered. Having done this I would go one step further, and if, in spite of general treatment the sneezing or attacks of hay fever persist, I would most certainly carry out local treatment in the nose. Of the methods of local treatment I have found none so efficacious as the use of the galvano-cautery. Given a puffy, spongy condition of the mucous membrane of the turbinated bones, with more or less occlusion of the passages, the application of the galvano-cautery has, in my experience, been followed by great benefit, it involves little or no risk of any sort, and, thanks to cocaine, can be carried out in a perfectly painless manner. Only in exceptional cases is a more severe local treatment necessary, but should there be deflection of the septum partially blocking one nostril, it may be necessary to forcibly straighten it, and thus restore free nasal respiration. Removal of the turbinated bones is hardly ever justifiable.

I have entered somewhat fully into this question of local surgical treatment of nasal neurosis, as Dr. Goodhart in his admirable Harveian Lectures on Common Neuroses, p. 48, has in my opinion taken up too strong a position when he says, "we should remember, in making use of severe measures of this kind, that we are only treating a symptom, and from the nature of the case adopting a means that is very unlikely to prove of any permanent good." While agreeing with him that "means of this kind are too often meddlesome and bad surgery," I have had so many patients under my care who have derived permanent benefit from the galvano-caustic plan of treatment, that I feel it my duty to protest against indiscriminate blame being attached to it, as well as against its unjustifiable abuse. In this, as in most worldly matters, "*In medio tutissimus ibis*" is the motto to follow.

Though gouty affections of the nose are comparatively rare, the pharynx is frequently the seat of trouble in the gouty, chiefly of a chronic nature, anything like acute gout of the throat being excessively rare. Morell Mackenzie<sup>1</sup> mentions the case of a patient who was "suffering from acute pharyngitis, when the symptoms suddenly disappeared, and an acute attack of gout developed in the great toe of the right foot; after three days the gouty inflammation of the toe disappeared, and acute hyperæmia of the pharynx supervened." He also mentions a case of acute œdema of the uvula disappearing upon sudden development of

<sup>1</sup> "Diseases of the Throat and Nose," Vol. I., p. 48.

gouty inflammation of the big toe.<sup>1</sup> M. Vaton<sup>2</sup> has described the case of a patient with a gouty history suffering from enormous œdema of the uvula, soft palate, and fauces. The swelling suddenly disappeared after lasting some days, simultaneously with the big toe being attacked with severe gout.

I have not myself seen anything similar to the above—that is, acute mischief in the throat being replaced by acute gout, and this in its turn giving way to a return of the throat mischief. On the other hand, I have had a good number of gouty patients who have had marked throat symptoms which seemed to me to be dependent on their general gouty condition. The appearance of the gouty throat is characteristic—the soft palate, the fauces, and the posterior wall of the pharynx present a gorged, congested appearance; the uvula is generally enlarged, and is sometimes of an enormous size. The colour of the mucous membrane is purplish red, and has a somewhat glistening appearance. As regards symptoms, patients complain of all degrees of discomfort, from slight difficulty and pain in swallowing to sharp pain radiating up to the ear, with excessive pain on swallowing. In some cases the patients complain of pain limited to certain areas, or they have the sensation of tickling, or of a foreign body in the throat. These symptoms are especially met with in the lithæmic—that is, in people with defective liver action, but who have not as yet shown any overt manifestations of gout.

I am of opinion that quinsy is sometimes a manifestation of the gouty diathesis, and occurs in the children of gouty parents more frequently than in others. In connection with gouty pharyngitis it is not uncommon to find the larynx also affected. The cords are congested and the mucous membrane of the larynx has sometimes a dusky coloration. The patient complains of pain through the larynx, and there may be some external tenderness. There is usually hoarseness with a frequent hacking cough and a little viscid expectoration, sometimes streaked with blood, is brought up with difficulty.

Sir Thomas Watson, in his classical lectures, writes: "A year or two ago an eminent physician of my acquaintance suffered a violent and dangerous attack of what was considered to be gout in the throat." It is extremely difficult to recognise what was included under the term of "gout in the throat" in the prelaryngoscopic days, but it is quite certain that nowadays we do not see gout attacking the larynx and threatening life. The only two cases of a definite gouty affection of the larynx, which Morell Mackenzie<sup>3</sup> records, are: (1) Gouty deposit around the crico-arytenoid joints on both sides, causing permanent dysphonia; deposit in lobule of left ear. (2) Gouty inflammation, producing fungous ulceration of the left ventricular band, resembling cancer; cured by a course at Wiesbaden. Sir Alfred Garrod<sup>4</sup> writes: "In one instance only have I seen what appeared to me to be a true gouty disease of the larynx." Inasmuch, however, as no laryngoscopic or *post-mortem* examination was made the case is not conclusive.

<sup>1</sup> JOURNAL OF LARYNGOLOGY, Vol. III., p. 313.

<sup>2</sup> "Revue de Laryngologie, d'Otologie, et de Rhinologie," 1891, p. 148.

<sup>3</sup> *Loc. cit.*

<sup>4</sup> "A Treatise on Gout and Rheumatic Gout," 3rd Edit., p. 452.

In my experience gout, as it effects the larynx, has been in the form of catarrh, more or less chronic, but yielding to alkalies and iodide of potassium. Careful pathological investigation bears out the comparative rarity of gouty changes in the larynx. Dr. Norman Moore<sup>1</sup> has noted the *post-mortem* appearance in eighty cases of gout, and as one of his conclusions states that "the articulations of the larynx rarely contains deposit," that is of urate of sodium.

In one case Sir Alfred Garrod<sup>2</sup> met with some points of deposit on the arytenoid cartilages which were proved to consist of urate of soda, both from their microscopical and chemical characters, and Duckworth<sup>3</sup> states that Virchow has detected a "trophus" in the posterior part of the right vocal cord. Uric deposits have been found in the crico-arytenoid ligaments. Ewart<sup>4</sup> quotes cases observed by Litton and Brooks of uratic deposits in the larynx.

#### OSTEO-ARTHRITIS, RHEUMATOID ARTHRITIS.

Osteo-arthritis affecting the crico-arytenoid joint has, up to the present time, received but scant attention. Sir Alfred Garrod<sup>5</sup> is inclined to attribute the aphonia, which he has observed in several cases, to implication of the arytenoid cartilages in the disease, but this view has not been confirmed by laryngoscopic or *post-mortem* observations. Bearing in mind how generalised the joint lesions of this disease are, I cannot but think that cases in which the crico-arytenoid joint is implicated occur fairly frequently but pass unrecognised, for I can see no reason why this joint should be exempt from the ravages of osteo-arthritis, more especially as a neighbouring joint, the temporo-maxillary articulation, is often attacked.

#### LEUKÆMIA.

Several cases of laryngeal stenosis due to leukæmia have been reported.<sup>6</sup>

Mager records the case of a patient, aged fifty-eight, who, after having suffered from leukæmia for a year, became dyspnoic. On laryngoscopic examination the mucous membrane of the larynx was red and swollen; the swelling appeared due to a hard infiltration; the vocal cords were swollen, and there was immobility of the right half of the larynx. Death followed tracheotomy in a few days. In this case, at the *post-mortem* examination, in addition to the usual subepithelial infiltration by leucocytes, there was perichondritis and necrosis of the right arytenoid cartilage. Leukæmic infiltration of the larynx represents a grave complication; it usually requires tracheotomy, and is a precursor of the fatal issue.

#### HODGKIN'S DISEASE.

In Hodgkin's disease running an acute course, œdema of the pharynx, especially of the arches of the palate and the uvula, coming on in successive

<sup>1</sup> "St. Bartholomew's Hospital Reports," Vol. XXIII., p. 289.

<sup>2</sup> *Op. cit.*, p. 205.

<sup>3</sup> "A Treatise on Gout," p. 85.

<sup>4</sup> "Gout and Goutiness," p. 208.

<sup>5</sup> "Gout and Rheumatic Gout," 3rd Edit., p. 519.

<sup>6</sup> JOURNAL OF LARYNGOLOGY, Vol. XI., pp. 233, 237, 272.

attacks, has been observed.<sup>1</sup> The swelling is probably due to leukæmic infiltration, and the administration of arsenic has good effect. In a chronic case of Hodgkin's disease an œdematous granular appearance of the uvula and the anterior palatine arch, which felt hard, was noticed. A similar condition has been seen in the larynx.

#### LYMPHATIC SYSTEM.

Owing to the universality of its distribution the lymphatic system necessarily plays an important part in all diseased processes. As Moritz Schmidt has pointed out, in a considerable number of cases of recurrent posticus paralysis the cause is quite obscure during life. A likely hypothesis in these cases is that the paralysis has been produced by a swollen mediastinal or cervical gland.

#### HÆMOPTYSIS.

There is hardly any symptom which gives rise to more anxiety to the patient and his medical attendant than hæmoptysis. The rule still holds good that blood which is coughed up should be regarded as coming from the lungs until there is distinct evidence to the contrary. Numerous cases are now on record in which a varicose ulcer on the posterior border of the septum, small ulcers and vascular ruptures in hypertrophied tonsils, enlarged vessels in the pharynx, a varicose condition of the veins at the base of the tongue, dilated vessels or ulceration of the larynx, have given rise to the suspicion of hæmoptysis, and the diagnosis has only been arrived at by the employment of the rhinoscope or laryngoscope, as the case may be.

Among the comparatively rare causes of hæmoptysis may be mentioned the presence of a leech in the larynx."<sup>2</sup> A dry laryngitis, in which crusts form on the vocal cords, may give rise to quite a severe hæmorrhage when they become detached, and thus, together with the concomitant cough and hoarseness, may, in the absence of a thorough examination, lead to an erroneous diagnosis of phthisis.

#### BRONCHITIS.

The intimate connection between the nasal passages and the bronchial tubes has for a long time been common property. There are certain persons who say that whenever they get a cold in the head it is sure to travel downwards, and set up bronchitis. This tendency is, however, much greater in those who suffer from stenosis of the nasal passages, interfering with proper nasal respiration. Even slight nasal affections, not sufficient to interfere with breathing, may be a predisposing cause of bronchitis. Thus Cahn<sup>3</sup> records a case of bronchitis coming on in an acute manner in a patient with small nasal polypi, and the bronchitis lasted until they were cleared out. Cahn specially notes that there was free nasal breathing.

<sup>1</sup> "Centralblatt für Laryngologie," Vol. XII., p. 559.

<sup>2</sup> "Revue de Laryngologie, d'Otologie, et de Rhinologie," 1890, p. 81.

<sup>3</sup> "Centralblatt für Laryngologie," Vol. XII., p. 424.

## ASTHMA.

One of the earliest reflex conditions which was recognised as being dependent in some cases upon intranasal disease is asthma, and though I cannot agree with some authorities that asthma is usually associated with intranasal disease, still cases of this sort occur with sufficient frequency to render it absolutely necessary for the physician to examine the nose in all cases of asthma. Numerous cases have now been recorded of asthma occurring in persons suffering from nasal polypi, in which the removal of these growths has completely freed the patient from the attacks of asthma.

Though polypi represent the intranasal lesion most frequently found associated with asthma, any affection of the nose may be the starting point of asthma. Spurs and crests on the septum, deflection of the septum, hypertrophic and atrophic rhinitis have been noted as apparently giving rise to asthma. Adenoids may also cause asthma. A patient of mine, aged twenty-one, who had suffered from asthma for two years, completely lost it after the removal of adenoids. According to Lichwitz<sup>1</sup> symptoms resembling asthma were seen in five patients as a complication of empyema of the accessory nasal cavities. Believing as I do in the connection between intranasal lesions and the development of asthma I would strenuously advise that a systematic examination should be made of the nasal fossæ and accessory sinuses, and if any gross lesion is found it should be promptly treated.

## EMPHYSEMA.

Emphysema is another lung affection which has intimate relations with diseases of the nose and throat. Any of the various causes of nasal obstruction may, as a result of the chronic pharyngeal and laryngeal catarrh, and consequent irritable cough thereby produced, give rise to emphysema. It is probable also that emphysema may be directly due to nasal obstruction; this is borne out by the experiments of Dr. Cerverello<sup>2</sup> on dogs. He finds that occlusion of the nostrils invariably produces in a few days pulmonary emphysema in completely healthy dogs.

I have seen the progress of a somewhat rapidly increasing emphysema at once checked by the amputation of an elongated uvula, and I have seen equally good results from the treatment of granular pharyngitis by the galvano-cautery. These remarks will, I think, be sufficient to indicate the desirability of looking out for the cause of any chronic cough, and not to be satisfied with simply ordering some cough mixture.

## PNEUMONIA.

Epistaxis is sometimes observed in pneumonia; it may be an early symptom, or occur as one of the critical phenomena. Just as acute rheumatism may follow an attack of tonsillitis, so, I believe, may pneumonia. Whether the pneumonia is of septic origin, or whether the

<sup>1</sup> JOURNAL OF LARYNGOLOGY, Vol. XI., p. 161.

<sup>2</sup> "Revue de Laryngologie, d'Otologie, et de Rhinologie," 1890, p. 773.

micro-organism (be it the diplococcus of Fraenkel or the pneumococcus of Friedlaender) first sets up the inflammatory mischief in the tonsil, and then proceeds to affect the lung, I must leave to be settled by those skilled in bacteriology.

*(To be continued.)*

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### THE BRADSHAW LECTURE ON SUBJECTIVE SENSATIONS OF SOUND.

*Delivered before the Royal College of Physicians of London, on November 5th, 1895,*

By W. R. GOWERS, M.D. Lond., F.R.S.

I PROPOSE to ask you to consider some features of the sounds that are heard when no external cause for them exists—subjective auditory sensations.

The time at my disposal makes it impossible even to attempt a general account of the subject. All that I propose to do is to present to you some of the more salient facts that have come under my notice regarding the two chief forms of these sensations—those of labyrinthine and of central origin—to endeavour to do this in such a way as may bring out those features and relations which seem to me to be of most importance. The cases in which the subjective sounds depend upon disease of the middle ear have come very little under my notice. They are seen chiefly by the aural surgeon. This is, however, less important, because such causes are effective through their action on the labyrinth, and the study of sounds of labyrinthine and central origin are of chief importance. I should add that the sounds that can be heard by another person (usually the effect of an intracranial aneurism) are also not considered.

One knows that tinnitus may be a continuous sound or pulsating, and that in the latter case the pulsations correspond to the arterial waves. You know also how many and extensive are the variations in character, from the simplest to the most elaborate sound. The very frequent coincidence of these sounds with evidence of ear disease, varying in seat and character, but usually involving the labyrinth and commonly limited to it, compel the conclusion that the most common source of these sounds is the internal ear, in which the auditory nerve is normally excited. But we have cases, especially those in which the sensations are the warning of epileptic fits, in which we must regard the auditory centre in the cortex of the brain as their source; and in rare cases the correctness of this conclusion has been proved by the discovery of organic disease in this region. It is strange that we have practically no evidence to show that any part of the intermediate path between the organ of hearing and the auditory cortex may be a cause of such sensations. We should, indeed, hardly expect them to be due to a morbid process in the nerve fibres which conduct the auditory impulses, but the grey matter at the junction of the pons and the medulla, which seems to be an intermediate centre, might reasonably be thought occasionally to give rise to impulses which produce in the centre the effect necessary for a sensation of sound. Yet such

evidence is not forthcoming. We are led at once to some important considerations by the common name of the symptom—"tinnitus aurium" or "tinnitus capitis,"—in popular language, "noises in the ears" or "noises in the head." Leaving for the present the reference of the sound to the head itself, the question arises, Why is the subjective sound referred to the ear and not to the external world? Subjective visual sensations always seem of outside origin; why do not those of hearing? The answer is complex, and brings before us many points connected with the subject. The apparent source of the sound seems to be, in part, a matter of mental inference. Continuous sensations—hissing or buzzing, for instance—seem as a rule to be of external origin when they are first observed, but their persistence soon convinces the sufferer that they cannot be; knowing that they must have their origin in the ear, he ceases to refer them to an external cause, and they then seem to him to be felt in the ear, although often, if he can separate the sensation and the inference, he can still for a moment realize that they seem due to something outside. It is so also with brief unfamiliar sounds. At first—now and then, indeed, always—they seem to have an external cause, but their repetition involves the knowledge that they have not, and the knowledge so acts on consciousness that their aural source seems to be felt. More elaborate sounds generally seem external, but, on the other hand, pulsating tinnitus is almost always referred to the ear even from its commencement. It may be compared by the patient to machinery and the like, but only as regards its character. The mechanism of pulsation in tinnitus is a question of very great interest, because this feature is common when there is no increase in arterial pulsation and when there is no auditory hyperæsthesia. Of course, it is met with in both these conditions, but I am referring now only to the common form. I must leave the consideration of the possible explanation of this feature, but I think that this sensation is seldom or never purely auditory, although it is only from the observation of very intelligent patients that the fact can be ascertained. There is a local sensation beside that of sound; it is, perhaps, generally perceptible only as a local character of the sound; sometimes, however, it is distinctly a suggestion of a pulsating sensation within the ear distinct from that of hearing. This fact gives importance to other local sensations not auditory. One patient with labyrinthine deafness and attacks of vertigo had occasionally, as an isolated symptom, a brief sensation which could only be described as a "rushing out" through the ear, evidently much more a simple sensation than a sound. Another patient, a man aged fifty years, with changes, probably gouty, in the left labyrinth, causing some deafness, had a buzzing noise which would occasionally change to a throbbing sensation certainly not auditory; and sometimes there would occur behind the ear a momentary sensation as if the bone were being crushed in—neither pain nor sound. These cases show how much we need more facts on this point from patients with the ability to observe.

It is not altogether difficult to understand such a feature as the local sensation I have referred to. We cannot doubt that nerve impulses are continually passing from the ear to the brain of which we have no consciousness. In such an organ as the ear morbid states which act on

the auditory nerves may readily produce impulses also in nerves that are of different function—impulses that act on consciousness. We can feel sure that unfelt afferent impulses are constantly produced in the middle ear. They must be continuously generated by its muscles.

Bilateral tinnitus may be referred solely to the ears, and sounds may be referred to the head which are produced only on one side. We see in this, moreover, the difference between the abnormal local excitation of the nerves and their normal stimulation; when the latter occurs on both sides the sound is always referred to an external cause. Sensations produced in one labyrinth are sometimes referred only to some one part of the head on that side. In one case of left-sided labyrinthine deafness, the sound was always referred to the left side of the head, but it seemed to spread when loud through the whole of the head; it was never referred to the ear. In other cases I have met with it has been referred to the parietal region, to the parietal and occipital, to the occipital only; and in one with considerable nerve deafness a persistent rumbling sound was always referred to the region between the temple and the vertex, never to the ear or any other part. In these cases of one-sided head-sound the extension to the whole head, when the sound becomes louder, is very common.

It is not easy to suggest an explanation of these varieties of localization. We may, however, remember that the sound of a tuning-fork applied to any part of the head is referred, approximately, to the region on which it is placed, quite apart from the sense of vibration communicated to the bone; although many or even most waves must reach the labyrinth by the *membrani tympani* and ossicles, they pass also from the bone to the membranous labyrinth, either directly, where two are connected, or through the perilymph. The correct localization of the sound must be due to the precise group of nerve endings that are chiefly stimulated. Since the causes of labyrinthine tinnitus are for the most part random processes, the nerve endings may be affected in various combinations, and it must happen that sometimes these combinations are such as to correspond to those that would be excited from some part of the skull. The same subjective localization will then occur. Yet cases are met with which seem to baffle all attempts to explain the apparent localization.

It is a curious fact that the subjective sounds which originate in the auditory centre in the cortex are referred to the same seats as those of labyrinthine origin. This is frequently the case with the central sounds included in this survey—those that occur as the warning of epileptic fits. When these are elaborate they are, it is true, referred to the external world, but when they are simple or “crude” they generally seem to the patient to be produced either in the head or in one or both ears. As examples I may mention a whistling sound referred to both ears, a buzzing sound which seemed to pass through the head from one ear to the other, a whistle referred to the ear on the side on which the subsequent unilateral convulsion occurred, and a whistle seemingly at the top of the head in one case and in another at the occiput. To the character of these epileptic sensations I shall have to return.

Some of the characters of the sound that are due to labyrinthine

disease have been already referred to and others will have to be mentioned in connection with points yet to be considered. These variations are so great as to baffle any attempt at minute classification, as they also baffle the capacity of language. Our vocabulary, however, extensive, is quite inadequate to describe our sensations, and the similes to which the sufferer has recourse are often misleading. A rough division may be made into (1) crude sounds, such as hissing, humming, machinery, rumbling, and the like; (2) tones, as a whistle, simple musical note, or the sound of a bell; and (3) elaborate sounds, such as music or voices, distinct or indistinct. We cannot usefully separate the continuous and pulsating sounds because a continuous sound so frequently becomes pulsating when it is louder. Yet it is probable that the difference is of significance when invariable—when a sound, for instance, remains continuous, however loud it at times becomes, or remains pulsating, however slight it may often be. The precise character of sounds needs to be carefully noted, since it will probably prove to be important when we obtain more careful and discriminating observations, pathological and therapeutical.

(*To be continued.*)

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## ABSTRACTS.

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### DIPHTHERIA, &C.

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**Crocq, Sen.** (Brussels). — *Contributions to the Nature and Diagnosis of Diphtheria.* "Wien. Klin. Rundschau," 1897, No. 4.

THE author reports upon two cases of typical angina lacunaris and one case of stomatitis ulcero-membranosa, in which he found the Loeffler bacilli in great masses; therefore he concludes that the microscopical examination has no importance for the diagnosis of the diseases of the pharynx, and that it cannot show us the nature of any variation.

*R. Sachs.*

**Gouguenheim.** — *Contribution to the Study of Diphtheria in Adults.* "Ann. des Mal. de l'Or.," etc., Mar., 1897.

THE author considers that diphtheria is often overlooked in the adult owing to the comparative mildness of the disease, and consequent neglect to make bacteriological examination. The disease may closely resemble an ordinary acute angina, and the adenitis frequently present may go on to suppuration. The larynx is not often involved, and in any case dyspnoea is very rarely serious.

Paralysis is infrequent and easily cured. Short, medium, and long forms of Loeffler's bacillus are found, but no clinical significance can in the adult be assigned to the various forms. Prognosis is not influenced by the presence of other microorganisms. Contagion is well marked. Albuminuria is a frequent symptom, and is not aggravated by serum injections. Cure is often spontaneous, but antitoxin is frequently indicated. Five cubic centimètres should be given in mild cases, ten to twenty cubic centimètres in serious cases. The serum has no effect in hypertoxic cases.

These conclusions are drawn from the study of a series of one hundred and twenty hospital cases treated during 1896.

*Ernest Waggett.*

**Hagenbesh-Burnharrrdt.**—*Contribution to the so-called Relapse of Diphtheria.* "Correspl. für Schweizer Aerzte," Mar. 15, 1897.

THE author reports that the so-called relapses of diphtheria are in reality not relapses, but cases not quite cured. He relates two cases as a proof of his meaning. One child left the hospital cured by serum, and entered again after a fortnight with diphtheria of the nose; again treatment by serum. Recovery. Another child cured by serum (Behring II.) in four days; after four weeks the author still found Loeffler bacilli.

R. Sachs.

**Roger and Bayeux.**—*Experimental Diphtheria.* ("Croup Expérimental.") Soc. de Biologie. "Presse Méd.," Mar. 17, 1897.

THE authors have experimented with solutions of pure toxin. Intratracheal injection in guinea-pigs caused death by systemic poisoning without the production of local symptoms. Eleven rabbits were employed in the same manner, solution of toxin being injected into the intact trachea. Of these, three died of general toxæmia without local signs; the remaining eight developed well-marked false membranes, giving rise to dyspnœa, etc. The rabbits proved more resistant to the disease than guinea-pigs, and in one individual destroyed for the purpose abundant false membrane was found, but no evidence of general intoxication. The authors think the pseudo-membrane indicates a certain power of resistance to the poison, which spends its strength in causing local disturbance.

Ernest Waggett.

**Tavel.**—*Bacteriological Examination of Diphtheria.* Versammlung des Med. Chir. Gesellschaft in Bern, July 25, 1896.

DESCRIPTION of the different methods used in Switzerland of bacteriological examinations of material suspicious of diphtheria. The author, and all the others who took part in the discussion, thought the best method the one of Berne (sterilized pledget of cotton in glass pipe and cardboard box).

R. Sachs.

**Wieland.**—*Relapses of Diphtheria after Treatment by Serum.* "Correspl. für Schweizer Aerzte," Mar. 1, 1897.

THE author has seen some typical relapses of diphtheria a short time after treatment by serum.

R. Sachs.

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## MOUTH, &C.

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**Claisse.**—*Primary Actinomyces of the Tongue.* "Presse Méd.," Mar. 31, No. 26, 1897.

A CASE is described which for some months remained undiagnosed. The disease commenced with a fissure on the edge of the tongue in the neighbourhood of a carious molar. The latter was dealt with. After an interval of some weeks the patient, a middle-aged man, returned with an indolent, firm, rounded tumour embedded in the tongue and resembling a gumma. Iodide of potassium was prescribed, and the tumour diminished in size. The drug was neglected, and the patient returned after an interval with a fluctuating swelling. On aspiration masses of ray fungus were for the first time discovered. Iodide of potassium gave a complete cure. The differential diagnosis is here discussed.

Ernest Waggett.

**Comtemale.**—*On Tubercular Ulcerations of the Buccal Cavity.* "L'Echo Méd. du Nord," No. 1, Vol. I., Jan., 1897.

To the first number of his journal the editor contributes a systematic and graphic account of tubercular ulcerations of the mouth, delivered in the form of a clinical lecture. In his experience, the co-existence of lingual and pharyngeal ulceration is very rare. He recommends lactic acid applications as the most successful of the palliative measures.

*Ernest Waggett.*

**Lermoyez and Barozzi.**—*A Case of Bilateral Bucco-Pharyngeal Zona. Differential Diagnosis of the Herpetic Eruptions of the Pharynx.* "Ann. des Mal. de l'Oreille," etc., March, 1897.

TRUE zona of the mouth and pharynx is uncommon, but it is extremely rare to find a bilateral distribution of the disorder. The case occurred in a man of seventy-eight, without general disturbance of health. The vesicles, which were arranged in groups, came out in successive crops, and lasted for some weeks. They were arranged with geometrical symmetry, and were situated on the hard and soft palate, the uvula, and the inner surfaces of the lips. The last crop had a definite unilateral distribution, being sharply rounded by the middle line of the palate. The territory affected exactly corresponded with the buccal area supplied by the second branch of the trigeminal nerve.

The remaining sixteen pages of this paper the authors devote to an exhaustive account of points of diagnostic differentiation between true zona and other herpetiform eruptions met with in the mouth and pharynx. This will best be dealt with here by reproduction of the conclusions arrived at in the tabular form appended to the paper. The three which require differentiation are:—(1) Herpetiform angina, which more particularly affects the tonsils. (2) True zona. (3) Recurrent pharyngeal herpes, a disorder usually found in women and associated with the menstrual function.

| HERPETIFORM ANGINA.  | PHARYNGEAL ZONA.  | RECURRENT PHARYNGEAL HERPES.  |
|--|---|---|
| Sudden onset, with headache, rigor, and intense general disturbance  | Insidious onset; very little general disturbance  | General disturbance often absent  |
| Pain in the throat increases. It is slight at first, but becomes intense at the time of eruption, and lasts to the end of the attack | Less pain in the throat. It is most marked at the onset, and then decreases. It has disappeared almost as soon as the eruption appears                                  | Very little pain. Burning sensation often unnoticeable.                     |
| Eruption bilateral   | Eruption unilateral   | Eruption very intense. Often localized to the same area during each relapse |
| Attacks the tonsils particularly; but also affects simultaneously the pharynx, larynx, and lips                                      | Limited to the area supplied by a nerve, usually the second division of the 5th. It affects the palate, uvula, gums, and cheeks, leaving the tonsils and pharynx intact | A particular spot; often in the neighbourhood of the anterior pillar        |
| Short duration. Four to six days' acute course   | Longer duration. Fifteen to twenty days' subacute course  | Eight to ten days' duration.  |
| Frequently recurs.   | Never recurs  | Always recurs, often with periodicity.                                      |

*Ernest Waggett.*

**Gaudier.**—*Note on a Vascular Tumour of the Tongue.* "L'Echo Méd. du Nord," March 7, 1897.

THE tumour occurred in a young woman, and had existed from an early age. At puberty it first began to give trouble, increasing in size at that time. At the age of eighteen it began to give rise to hæmorrhages.

Examination showed a violet-coloured sessile tumour, of the size of a nut, situated at the base of the tongue to the left of the middle line. It was soft in consistence, and was entirely reduced by digital pressure. Two or three distinct mammillated prominences gave to the swelling the aspect of a bundle of worms. No enlarged afferent or efferent vessels were present.

The tumour was removed with a cold snare after transfixion by a needle. No hæmorrhage occurred. Microscopic examination showed the growth to consist of normal papillæ, in each of which the central artery was much dilated. It appears to be an example of papillary angioma or angiomatous papilloma. *Ernest Waggett.*

**Pakes, W. C. C.**—*The Bacillus of Friedlaender in Pharyngitis and Tonsillitis.* "Brit. Med. Journ.," March 27, 1897.

IN MM. Nicolle and Hébert's published account of the occurrence of the pneumo-bacillus of Friedlaender on the throat of patients suffering from tonsillitis, follicular tonsillitis or membranous pharyngitis, upwards of one thousand six hundred serum tubes inoculated from the throats of patients were examined by them, and they found the pneumo-bacillus of Friedlaender eight times, six times alone. Since November, 1894, upwards of five hundred serum tubes, inoculated from the throats of patients in the wards or out-patients of Guy's Hospital, have been examined. In five cases the author has found the bacillus of Friedlaender; twice it was found on the surface of the serum in pure cultivation, twice in association with the Klebs-Loeffler bacillus, and once with the staphylococcus aureus.

The morphological characters which they exhibited were :—

1. Non-motility.
2. Polymorphism.
3. Decoloration when stained by Gram's method.
4. The presence of a well-developed capsule, especially when taken from the heart-blood of the inoculated mice after death.

The cultural characters were as follows :—

1. Whitish, semi-translucent, sticky growth in bouillon.
2. Aërobic and anaërobic growth in gelatine, causing no liquefaction.
3. Whitish, moist, raised growth on slanted gelatine, the growth slipping to the bottom of the tube after four or five days.
4. Abundant gas production in glucose gelatine shake cultivation.
5. Slimy and almost transparent growth on agar and blood serum.
6. Formation of acid in dilute lactose bouillon.
7. Coagulation of milk with an acid reaction (in four cases before the ninth day, in one case on the eleventh day).
8. Brownish abundant growth on potato.

*Pathogenicity.*—Mice were inoculated at the root of the tail with a small quantity of a young agar culture from each case. In two cases the mice were dead on the second morning; in the other three cases they were dead on the third morning. The typical capsulated bacilli were found in the heart-blood and spleen of each mouse, and from the heart-blood pure cultures were recovered.

Notes of the cases are unfortunately not very full.

Cases I. and II. (both children). There were small yellowish plugs on both tonsils, which were spreading towards one another. Klebs-Loeffler bacilli were

found in conjunction with the bacillus of Friedlaender. The children were lost sight of.

Case III. A man, aged thirty; sore throat noticed for a few days. The fauces were red, and the tonsils red and swollen: there was a slight colourless exudation on both sides of the fauces. There was no constitutional disturbance. The cultivation on coagulated blood serum was a pure one of Friedlaender's bacillus. On the following day the throat had the same appearance, and the second cultivation again proved to be a pure one of the same bacillus.

Case IV. A man, aged twenty, ill one week. The fauces were red and injected, and there were two or three whitish plugs over the crypts of the tonsils, but no sign of membrane. The culture on blood serum was found to consist of the bacillus of Friedlaender and staphylococcus aureus. Two days later the throat was still inflamed, but less sore. A second cultivation revealed the presence of the same two organisms.

Case V. A girl, aged six. The tonsils were red and swollen, and a few plugs of whitish material were present. The temperature was 100° Fahr. A pure cultivation of Friedlaender's bacillus was found on the blood serum. *R. Lake.*

## ŒSOPHAGUS.

**Bull, W. F., and Walker, J. B.**—*A Successful Case of External Œsophagotomy for Tooth-Plate Twenty-two Months impacted, with Summary of One Hundred and Sixty-seven Operations recorded up to January, 1897.* "Med. Rec.," Vol. LI., No. 10.

THE patient, a female of forty, had a fainting fit in November, and lost her plate of upper false teeth. Next day she could not swallow, but there was only slight pain. Her medical attendant could pass nothing down the œsophagus. Swallowing, however, gradually became easier, and she had no material discomfort for eighteen months. Now dysphagia, loss of voice and strength, came on. No bougie would pass more than seven inches from the teeth. Operation was decided on, and rectal feeding employed for five days to get up the strength. The œsophagus was opened just above the sternum on a bougie, and a pouch was found one inch beyond the episternal notch; this pouch contained the plate, which was removed after division of the anterior wall of the pouch. The patient was fed through a tube passed through the wound for thirteen days, the after history being uneventful. Of the 167 cases reported up to date, in only four was the impaction of longer duration, viz., twelve years, three years and three months, two years and three months, five years and nine months. The following table is given as comprising a series of thirty-two cases not hitherto grouped together:—

| No. | Operator ;<br>Reference.  | Age . | Sex. | Kind of<br>Foreign<br>Body. | Symptoms.  | Elapsed<br>Time since<br>Accident. | Location of<br>Foreign Body.                           | Treatment of<br>Wound.  | Resul t.              | Nourishment and Remarks.   |
|-----|---|-------|------|-----------------------------|--|------------------------------------|--|---|-----------------------|--|
| 1   | McLean, Leroy,<br>"N. Y. Med.<br>Rec.," Sep. 13,<br>1884. "La Se-<br>maine Méd.,"<br>1890, 150. | 40    | M.   | Plate.                      | Pain; only liquids.  | 4 days.                            | Just below cri-<br>coid cart.                          | Both wounds left open,<br>packed with gauze   | R.                    | Enemata; 48 hrs. drank milk; 72 hrs.<br>swallowed fluids, quite well; 6th day,<br>no leaking; 20th day, healed, home.<br>3 weeks well.   |
| 2   | Perrin, "La Se-<br>maine Méd.,"<br>1890, 150.   | 10    | F.   | Shirt button.               | Pain; only small<br>amounts liquids.                         | 12 days.                           | Region of cri-<br>coid.                                | (Es., catgut; skin, silk;<br>gauze drain.   | R.                    | Enemata; nothing by mouth for 72 hrs.  |
| 3   | Morse, Brit. Med.<br>Jr., 1891, 2-21,<br>403.   | 32    | F.   | Plate, 1 x 1½.              | Pain; dysphagia.   | 48 hours.                          | 7 inches below<br>teeth.                               | Open; 2 drain. tubes;<br>21 days, well.   | R.                    | Enemata; nothing by mouth for 72 hrs.  |
| 4   | Woods, Brit. Med.<br>Jr., 1891, 917.  | 29    | M.   | Stone, 62ogr.               | Pain; dyspnoea.  | 24 hours.                          | 9 inches below<br>teeth.                               | Open ext. wound; ans.<br>closed.  | D. sepsis.            | Stomach tube; enemata.   |
| 5   | Furner, "Lancet,"<br>1891, 1, 979.  | 44    | F.   | Plate, 3<br>teeth.          | Pain; dysphagia;<br>emaciation.                              | 5 years<br>months.                 | 9 10½ inches be-<br>low teeth.                         | (Es. not closed; skin<br>open; gauze packing,<br>drain. tubes.                                  | R.                    | Enemata every 4 hrs.; 4 ozs. beef tea;<br>nothing by mouth for 48 hrs.; 72 hrs.,<br>wound septic and leaking; 5th day,<br>stomach tube; 21st day, swallowed<br>bread and milk; 28th day, healed. |
| 6   | Wight, "An.<br>Surg.," 1891, 100.   | 25    | M.   | Bone.                       | Pain; dysphagia.   | 4 days.                            | 10½ inches be-<br>low teeth.                           | Open, drain.  | R.                    | Stomach tube; much regurgitation; fed<br>with enemata considerably; would not<br>use stomach tube in another case.   |
| 7   | Gay, "Boston Med.<br>and Surg. Jr.,"<br>1892, p. 332.   | 3½    | F.   | 1 cent piece,<br>¾ inch.    | Pain, gradually in-<br>creasing; dyspha-<br>gia; emaciation. | 8 months.                          | 2 inches below<br>top of ster-<br>num.                 | Wound left open; drain.<br>tube 24 hrs.; 13 days,<br>about ward; 23 days,<br>completely healed. | R.                    | 6 hrs. later, water; 24 hrs., milk s.o.s.;<br>some leaked through; enemata every<br>2 hrs.   |
|     | Gay, "Boston Med.<br>and Surg. Jr.,"<br>1892, p. 332.   | 28    | M.   | Dental plate,<br>4 teeth.   | Pain; dysphagia.   | 4 days.                            | 4 inches below<br>top of ster-<br>num.                 | Closed with silk; 3 days<br>later, slough.  | D. 5 days,<br>sepsis. | Stomach tube; enemata: delirium;<br>leaking.   |
| 9   | Paul, "Liverpool<br>Med. Chir. Jr.,"<br>1892, 251.  | 33    | M.   | Plate.                      | Pain; bloody mu-<br>cus; dysphagia.                          | 48 hours.                          | Top sternum.   | (Es. closed, catgut; ext.<br>wound open; 12 days,<br>well.                                      | R.                    | 48 hrs. by mouth; little escaped; 4 days,<br>closed.   |
| 10  | Alexandroff, "La<br>France Méd. et<br>P. Méd.," 1892,   | 2     | M.   | Button.                     | Pain; bloody mu-<br>cus; dysphagia.                          | 2 days.                            | 12 cm. below<br>teeth.                                 | (Es. closed, catgut; ext.<br>wound open, 12 days,<br>well.                                      | R.                    | Recovered without complications.   |
| 11  | Post, A., "Boston<br>Med. and Surg.<br>Jr.," 1893, Dec.<br>26                                   | 12    | F.   | 25 cent piece.              | Pain; dyspnoea;<br>only liquids.                             | 5 days.                            | Midway be-<br>tween cricoid<br>cart. and ster-<br>num. | Closed, first intention;<br>no leaking; wound<br>closed top and bot-<br>tom; drain.             | R.                    | Milk by mouth 24 hrs. after operation;<br>none through wound.  |

| No. | Operator;<br>Reference.                             | Age.  | Sex. | Kind of<br>Foreign<br>Body. | Symptoms.                                  | Elapsed<br>Time since<br>Accident. | Location of<br>Foreign<br>Body.   | Treatment of<br>Wound.  | Result.    | Nourishment and Remarks.   |
|-----|---|-------|------|-----------------------------|--|------------------------------------|-----------------------------------|---|------------|--|
| 12  | McLean, "N. Y. Med. Rec.," Sep. 13, 1884.           | 16 m. | F.   | Penny.                      | Pain; dysphagia; regurgitation; inanition. | 7 days.                            | Level of clavicle.                | No sutures; packed.   | R.         | Rapid and complete.  |
| 13  | Terrillon, "Rev. de Chir.," 1893, 339.              | 26    | M.   | 5 fr. piece.                | Pain; dysphagia; regurgitation.            | 13 days.                           | 22 cm. below teeth.               | No sutures; packed.   | R.         | Enemata for 3 days; afterward also milk by mouth; 11th day, well. Stomach tube.  |
| 14  | Ségon, "Rev. de Chir.," 1893, 339.                  | 40    | F.   | Plate, teeth.               | Pain; dysphagia.                           | 3 days.                            | Head of sternum.                  | (Es., catgut; ext. wound packed.  | R.         |  |
| 15  | Jalaguier.  | 2½    | M.   | Bit of Lead.                | Pain; dysphagia.                           | 6 days.                            | 13 cm.                            | (Es., catgut; ext. wound packed.  | R.         | Milk by mouth all right till 3rd day, when it leaked a little; recovered.  |
| 16  | Wallace, "Lancet," 1894, March 24, p. 734.          | 28    | F.   | Plate with teeth.           | Pain; dyspnœa; dysphagia; only liquids.    | 12 hours.                          | 1½ inch above lower end of œsoph. | (Es. closed with catgut; gauze drain. to m.m.; superficial wound open. Stomach m.m., continuous silk; serous coat with Lembert silk; ext. wound closed. | R.         | Nothing by mouth for 44 hrs., then 2 ozs. barley water; none escaped from wound; then by mouth every 4 hrs. for 4 days; then little escaped; fed by stomach tube t.i.d.; nutrient enemata every 4 hrs. for 5 days.                       |
| 17  | Wilson, "Liverpool Med. Chir. Jr.," 1894, 486.      | 65    | M.   | Plate.                      | Pain; dyspnœa; dysphagia; only liquids.    | 24 hours.                          | Level of cricoid-thyroid.         | All open.   | D. sepsis. | Stomach tube every 6 hrs.; stomach washed.   |
| 18  | Bickersteth.  | 50    | M.   | Plate.                      | .....                                      | 3 days.                            | .....                             | All open.   | R.         |  |
| 19  | Froelich, "Arch. Prov. de Chir.," 1894, 698.        | 10    | M.   | Peach stone.                | Pain; dyspnœa; dysphagia; profuse mucus.   | 30 hours.                          | 18 cm. below teeth.               | (Es. and skin, open; gauze packing, drain. tube.  | R.         | 1st day, milk by stomach tube; 2nd day, introduced stomach tube every 8 hrs., and fed; 3rd day, introduced stomach tube by nose every 8 hrs. and fed; regurgitated fluid alongside of tube; 14th day, œs. healed; 21st day, skin healed. |
| 20  | Cahier, "Arch. de Méd. et Phar. Mil.," 1894, 23-98. | 27    | M.   | Plate.                      | Dysphagia; bloody mucus; pain.             | 48 hours.                          | 20 cm. level of cricoid.          | (Es. not sutured; s. tube through mouth; ext. wound packed.   | D. sepsis. | Enemata; fluids through stomach tube; 72 hrs., dead. Autopsy—œs. walls ulcerated and perforated; mediastinal abscess; œdema of glottis.  |
| 21  | Schmiegelow, "Rev. de Laryngol.," 1894, 289.        | 38    | M.   | Plate.                      | Dysphagia; bloody mucus; pain.             | 4 weeks.                           | Cricoid.                          | Mucous coat, gauze drain.   | R.         | Stomach tube through œs. for 8 days; left for 2 weeks; then eating; 4 weeks, well.   |
| 22  | Hamilton, "Med. News," 1894, p. 98.                 | 24    | M.   | Walnut.                     | Pain; dyspnœa; dysphagia.                  | 16 hours.                          | 7½ inches below teeth.            | (Es., catgut sutures, gauze drain.; skin, silk.   | R.         | 3rd day, wound dressed; some leaking; slight suppuration; stomach tube through nostrils for 3 weeks; well in 4 weeks.  |

|    |  |    |   |    |                                      |                           |                             |  |       |  |   |       |            |   |
|----|--|----|---|----|--------------------------------------|---------------------------|-----------------------------|--|-------|--|---|-------|------------|---|
| 24 | Deaver, J. B., "New Eng. Med. Month," 1895, 490.   | 22 | Chavier, "Arch. Prov. de Ch., 1895, IV., 117. | 35 | Abbe, "N. Y. Med. Jr.," 1895, 1-319. | F. Plate.                 | Pain; dyspnoea; 7 days.     | dysphagia.   | ..... | Head of ster. num.                               | .....   | ..... | D. sepsis. | 1st day, enemata; 2nd day, stomach tube. 16th day, œs. healed, no leaking; 28th day, well; solids by mouth. 1st day, enemata; 2nd day, sterile milk through soft-rubber stomach tube; 3rd day, gauze removed, small drain tube inserted; 10th day, œs. healed primarily, no leaking; 11th day, soft solids; 15th day, external wound closed; 2 months, average-sized œs. bougie passed easily. Tube passed into stomach through external wound and fluids poured down this tube 4 i.d.; regurgitation along side of tube; tube left here for 16 days, then through nose for 12 days. First 5 days enemata alone; 7th day, swallowed milk and leaked; 21st day, fistula closed and well. Recovered rapidly; enemata. |
| 25 |  |    |   |    |                                      | M. Plate with 4 teeth.    | Pain; dysphagia; 15 months. | emaciation; regurgitation; stricture which would not admit even the smallest œs. bougie. | ..... | 9 to 10 inches below 4 inches below low cricoid. | Fine catgut through muscular coating and submucous coats of œs.; ext. wound packed with iodoform gauze. | ..... | R.         | 1st day, enemata; 2nd day, stomach tube. 16th day, œs. healed, no leaking; 28th day, well; solids by mouth. 1st day, enemata; 2nd day, sterile milk through soft-rubber stomach tube; 3rd day, gauze removed, small drain tube inserted; 10th day, œs. healed primarily, no leaking; 11th day, soft solids; 15th day, external wound closed; 2 months, average-sized œs. bougie passed easily. Tube passed into stomach through external wound and fluids poured down this tube 4 i.d.; regurgitation along side of tube; tube left here for 16 days, then through nose for 12 days. First 5 days enemata alone; 7th day, swallowed milk and leaked; 21st day, fistula closed and well. Recovered rapidly; enemata. |
| 26 | Gangolphe, "Lyon Méd.," 1895, 69.                  | 47 |   |    |                                      | M. Stone.                 | 2 days.                     | .....  | ..... | 21 inches below teeth.                           | .....   | ..... | R.         | Tube passed into stomach through external wound and fluids poured down this tube 4 i.d.; regurgitation along side of tube; tube left here for 16 days, then through nose for 12 days. First 5 days enemata alone; 7th day, swallowed milk and leaked; 21st day, fistula closed and well. Recovered rapidly; enemata.  |
| 27 | Ferguson, "Am. Jr. of Surg. and Gynæ.," 1896, 128. | 36 |   |    |                                      | M. Plate with 3 teeth.    | Exhaustion.                 | .....  | ..... | Cricoid level.                                   | .....   | ..... | R.         | Tube passed into stomach through external wound and fluids poured down this tube 4 i.d.; regurgitation along side of tube; tube left here for 16 days, then through nose for 12 days. First 5 days enemata alone; 7th day, swallowed milk and leaked; 21st day, fistula closed and well. Recovered rapidly; enemata.  |
| 28 | Maylard, "Glasgow Med. Jr.," 1896, 216.            | 3  |   |    |                                      | M. Penny.                 | Dysphagia.                  | .....  | ..... | Behind head of sternum.                          | .....   | ..... | R.         | Tube passed into stomach through external wound and fluids poured down this tube 4 i.d.; regurgitation along side of tube; tube left here for 16 days, then through nose for 12 days. First 5 days enemata alone; 7th day, swallowed milk and leaked; 21st day, fistula closed and well. Recovered rapidly; enemata.  |
| 29 | Schramm, "Cent. fur Chir.," 1896, p. 211.          | 1  |   |    |                                      | Button.                   | .....                       | .....  | ..... | Behind head of sternum.                          | .....   | ..... | R.         | Tube passed into stomach through external wound and fluids poured down this tube 4 i.d.; regurgitation along side of tube; tube left here for 16 days, then through nose for 12 days. First 5 days enemata alone; 7th day, swallowed milk and leaked; 21st day, fistula closed and well. Recovered rapidly; enemata.  |
| 30 | Curtis, B. F., personal commun.                    | 35 |   |    |                                      | M. Plate.                 | .....                       | .....  | ..... | Level of cricoid.                                | .....   | ..... | R.         | Tube passed into stomach through external wound and fluids poured down this tube 4 i.d.; regurgitation along side of tube; tube left here for 16 days, then through nose for 12 days. First 5 days enemata alone; 7th day, swallowed milk and leaked; 21st day, fistula closed and well. Recovered rapidly; enemata.  |
| 31 | Curtis, B. F., personal commun.                    | 3  |   |    |                                      | M. Button badge with pin. | .....                       | .....  | ..... | Between cricoid and sternum.                     | .....   | ..... | R.         | Tube passed into stomach through external wound and fluids poured down this tube 4 i.d.; regurgitation along side of tube; tube left here for 16 days, then through nose for 12 days. First 5 days enemata alone; 7th day, swallowed milk and leaked; 21st day, fistula closed and well. Recovered rapidly; enemata.  |
| 32 | Bull, present case.                                | 40 |   |    |                                      | F. Plate.                 | .....                       | .....  | ..... | Behind head of sternum.                          | .....   | ..... | R.         | Tube passed into stomach through external wound and fluids poured down this tube 4 i.d.; regurgitation along side of tube; tube left here for 16 days, then through nose for 12 days. First 5 days enemata alone; 7th day, swallowed milk and leaked; 21st day, fistula closed and well. Recovered rapidly; enemata.  |

R. Lake.

**Carrière.**—*A Case of Cancer of the Œsophagus. Difficulties of Differential Diagnosis.* "Arch. Clin. de Bordeaux," Jan., 1897.

THIS is the description of a case of mediastinal tumour presenting physical signs which rendered diagnosis difficult. The symptoms appeared suddenly, after a severe mental emotion. Œsophageal obstruction was present, and paralysis of the left vocal cord. At the same time the heart was pushed down, and dulness was present about the first and second costal interspaces on the left side, and this was accompanied by auscultatory signs of aortic constriction, as well as evidence elsewhere of arteriosclerosis. The right radial pulse was diminished in volume and delayed in time. The œsophagus was impermeable to the passage of a bougie—a circumstance that seemed to exclude a mere narrowing of that tube from external pressure. Moreover, no pulsation was detected over the dull area, although bruit was present. The interest of this problem in diagnosis is largely dependent on the details of the various physical signs, all of which cannot be reproduced here.

*Post-mortem.*—All these signs were fully explained by the extent and situation of an extensive cancer of the œsophagus, together with masses of affected glands. The aorta was found to be greatly narrowed by external pressure.

Ernest Waggett.

## NOSE, &C.

**Bergeat, H.** (Munich).—*Asymmetry of the Bony Choanæ.* "Archiv für Laryngologie und Rhinologie," Band IV., Heft 3.

THIS paper is based on the examination of the skulls in the Anatomical and Pathological Institute of Munich. The collection included about one thousand two hundred human skulls, several dozens of various apes, and about one hundred of other mammals, chiefly carnivora, including sixty-eight dogs' skulls.

(A) *Mammals with Elongated Skulls.*—Striking asymmetry of the choanæ was present in the single specimens examined of the skull of a sheep and of a badger, in two of the five skulls of foxes, and in nine of the sixty-eight dogs' skulls. Of this series of dogs' skulls, twenty-three belonged to the large races, with eight examples of asymmetry, while in the forty-five belonging to the smaller races the deformity was observed only once.

In the foregoing instances the asymmetry was localized chiefly at the lower edge of the choanæ; the posterior edge of the hard palate being situated further forward, the one-half of the palate seemed shortened. It was only exceptionally, however, that a loss of surface of the corresponding horizontal palate process could be recognized with certainty, the diminution from before backwards being equalized by a gain from side to side. In addition, the pterygoid bone sometimes underwent a lateral displacement on the same or opposite side. Finally, there might be deviation of the posterior edge of the septum.

In almost every specimen presenting asymmetrical choanæ there were irregularities of the skull to a lesser or greater degree, e.g., one condyloid process or glenoid fossa was pushed further backwards.

(B) *Apes.*—Without exception, all the skulls of large apes presented marked asymmetry of the choanæ, those of the smaller varieties, on the other hand, only exceptionally and to a slight degree. The form of asymmetry, as also of the choanæ, varied in all the species.

(C) *Man.*—It is necessary to distinguish (1) the asymmetrical position of the choanæ as a whole; (2) the asymmetry or inequality of the two choanæ.

The asymmetrical position may be brought about in various ways, *e.g.*, in consequence of bony absorption the neighbourhood of one condyloid process sinks into the cranial cavity, and the corresponding half of the skull comes to occupy a lower level than the other half: the septum is no longer vertical, and one choana lies somewhat above the other.

The inequality or real asymmetry of the choana has been found in 10 per cent. of the specimens examined by the author.

The commonest and most characteristic type is that in which one pterygoid process is more horizontal, *i.e.*, inclined more downwards and outwards, so that the rounding, breadth, and height of the corresponding choana in its upper part are lessened. The loss is balanced by the deeper position of the floor. Numerous details regarding this and other types are given.

The skulls of a large number of fetuses and newly-born infants were examined, but no example of choanal asymmetry was discovered.

The author distinguishes the following etiological factors:—

1. Unequal action of mechanical and statical forces when the bones of the head are insufficiently consolidated, *e.g.*, prolonged lying on one side, wryneck, osteomalacia.

2. Primary irregularities of the parts enclosing the choanæ.

3. Secondary displacements of the sphenoid and vomer in consequence of the asymmetrical growth of the rest of the skull.

4. Anthropological factors—thus: in an entire series of six skulls from Abyssinia and Upper Egypt the right choana was found prolonged upwards, without the presence of any other striking abnormality.

The practical points in connection with asymmetry of the choanæ are: its relation to asymmetry of the whole skull, to inequality of the Eustachian cushions and of the fossæ of Rosenmüller, to asymmetry in the naso-pharynx, hard and soft palate, upper jaw, and, lastly, to the unequal width of the nose and deformities of the septum.

The author has also examined numerous unmacerated specimens, but they have not yielded nearly so remarkable results as the bony preparations.

Finally, he described several examples of asymmetry due to pathological conditions.

*A. B. Kelly.*

**Keyser** (Breslau).—*Relation of Ozæna to Adenoids.* “Wien. Klin. Rundschau,” 1897, No. 9.

OUT of twenty-nine cases of ozæna (ages between six and nineteen) the author in twenty-three did not find any hypertrophy of the pharyngeal tonsil (adenoids); in six cases there was a slight notice of it. So he says: Is there any explanation—or, at least, any acceptable hypothesis—for this exclusive relation between ozæna and adenoids? The author thinks one is forced to accept that the ozæna is connected with certain irregularities of the constitution, through which is caused the incomplete development of the lymphatic plexus of the throat. An expression of such irregularities of the constitution, we may consider in ozæna characteristic peculiarities of the form and growth of the cranial bone. In spite of it, he thinks that the theory of Abel is quite acceptable, and that the bacillus mucosus, or any other special parasite, may be wanted to produce the ozæna. [Grünwald related, some time ago, two cases of ozæna cured by operation of adenoids. The author mentions these two cases, with the remark that this cure is very improbable. But the reporter, some time ago, also operated upon two large adenoids, and, after the operation, noticed a remarkable improvement of the simultaneous ozæna in these two cases.—*Rep.*]

*R. Sachs.*

**Lacoarret.**—*The Inferior Turbinate ; its Anatomical and Pathological Identity ; its Hypertrophy and Benign Degenerations.* "Rev. Hebd. de Laryng., Rhinol., et Otol.," Feb. 27, 1897.

THE author points out that, unlike the other turbinates, the inferior forms part of the embryonic buccal cavity, and is not a mere reduplication of the walls of the olfactory groove. Evidence of this origin is found in the character of the mucous membrane, which resembles that of the pharynx in possessing adenoid tissue and muscle fibres. Just as anatomically it is not a part of the ethmoid, like the other turbinates, so pathologically it differs from those bodies in the manner of its degeneration. The initial stage of its process of degeneration is inflammatory, characterized by a redness and swelling wholly reduced by cocaine. Hypertrophy succeeds; the swelling is still reduced by cocaine, but not completely so. The hypertrophied body may be smooth or papillated. This stage may pass to the pure myxomatous degeneration, smooth or papillated. The swollen body is now of a yellowish or greyish colour, soft and compressible, but not reduced in size by cocaine. The fibro-myxomatous degeneration is equally unreduced by cocaine, but it is firmer in consistence and is not yellow, but has more or less of a pearly whiteness. Both in naked-eye appearance as well as in microscopic detail, each stage differs from lesions of a similar nature in the other turbinates, and this fact accords with the separate development and the anatomical identity of the inferior turbinates.

*Ernest Waggett.*

**Macintyre.**—*The Use of the X Rays and Fluorescent Screens in the Nasal and Pharyngeal Regions.* "Arch. Intern. de Lar., Otol., et Rhin.," Jan. and Feb., 1897.

FIGURES are given indicating the method of obtaining shadows on the fluorescent screen from observation, either directly or with the laryngeal mirror. The screen takes the form of a tongue depressor of glass, covered on one side with the fluorescent salt. The platino-cyanides are extremely poisonous, and should be covered with a thin sheet of aluminium.

*Ernest Waggett.*

**Piaget (Grenoble).**—*The Means of Defence in the Nasal Fossæ against Invasion by Micro-organisms.* ("Les Moyens de Défense," etc.) "Annal. des Mal. de l'Or., du Lar.," etc., Feb., 1897.

THE author corroborates the statements of previous writers with regard to the aseptic condition of the nasal fossæ.

Culture experiments with the nasal mucus of animals immediately after death gave negative results in fifteen out of thirty-eight cases. The author considers that the positive results were, in the majority of instances, due to accidental contamination. The bactericidal action of nasal mucus in vitro forms the subject of a number of experiments which are here detailed.

The method employed was the inoculation of tubes of nasal mucus from which plate cultivations were made after a certain interval. Cultivations for comparison were made from inoculations in bouillon. Streptococcus, staphylococcus aureus, bacillus coli, Eberth's bacillus, bacillus pyocyaneus, and Loeffler's bacillus were used.

A large number of experiments were not made in each case, but the results are sufficient to show that a very marked bactericidal action is exerted by the mucus against all the organisms mentioned with exception of bacillus pyocyaneus.

In many instances complete sterility was obtained. Previous work has shown that nasal mucus is fatal to anthrax bacilli, and its destructive action on Loeffler's bacillus is shown by these experiments to be "very intense."

The aseptic condition of the nasal fossæ is attributable to more than one line of defence, but of these the bactericidal action of the mucus is pre-eminent, as proved by its action in vitro. At the same time this power is not without its limits, and the number of bacilli inoculated influences the results of experiment. Moreover, the intensity of the action varies with different species of micro-organism.

Ernest Waggett.

**Ribary, U.**—*Clinical and Anatomical Contributions to the Study of Rhinitis Sicca Anterior.* "Arch. für Laryng. und Rhinol.," Band IV., Heft 3.

IN 1889, Siebenmann directed attention to a peculiar affection of the cartilaginous nasal septum, which he termed rhinitis sicca, and which he regarded as an important etiological factor in epistaxis, and in ulcers and perforations of the cartilaginous septum. The author has studied the condition in Prof. Siebenmann's polyclinic, and now presents a detailed account of the results of his investigations.

Rhinitis sicca anterior appears as a dry catarrh; the term is applicable only to those cases in which the affection is limited to the mucous membrane of the cartilaginous septum. Xanthosis of the nasal mucous membrane, as described by Zuckerkandl, corresponds to a certain stage of rhinitis sicca anterior; similar conditions have been referred to by Voltolini and Hajek.

The author finds that of the patients in the polyclinic suffering from nasal disease about ten per cent. had rhinitis sicca anterior. They were mostly young people, and chiefly females.

A very full account is given of the methods employed and the appearances observed in the microscopical investigation. The more important conclusions are summarized below.

In the mucous membrane numerous cells, fatty granular cells and scanty eosinophil cells, undergoing hyaline degeneration, are found. In addition, a great deal of pigment is scattered through the mucous membrane partly within and partly outside the cells. The pigment must be regarded as hæmatogenous (hæmatoidin); the reddish-brown colour with carbolic fuchsin is a specially characteristic reaction. In the mucus of the transformed mucosa, one or several layers of a peculiar substance are found, which is deposited in and upon the superficial layer of cells. This shows in its relation to stains the greatest similarity to kerato-hyalin; most probably its products of decomposition give rise to the characteristic smell of atrophic nasal mucous membrane; it is, in any case, the cause of the glossiness of the secretion on mucous membranes affected with dry catarrh. The depressions in the diseased mucous membrane visible to the naked eye correspond only exceptionally to dilated ducts of mucous glands; they are produced as a rule by peculiar folding of the epithelial covering.

Contrary to what is generally believed, the normal mucous membrane of the cartilaginous septum is covered with ciliated epithelium almost as far as the membranous septum. In the disease in question, however, the ciliated is converted into pavement epithelium. A similar change takes place in atrophic rhinitis. Rhinitis sicca anterior may, therefore, be regarded as atrophic rhinitis confined to the septum.

The etiology is much the same as in dry catarrhs of the upper air passages; dust appears to be one of the chief causes. Predisposition also plays a part. Crusts form in the vestibule, especially on the cartilaginous septum, and give rise to a feeling of tension, which causes violent sneezing and leads to the habit of picking the nose. In consequence of the frequent injury of the mucous membrane thus produced, erosions, epistaxis, and small ulcers result. When the septum is deviated the rhinitis sicca is found on the convex surface.

As to epistaxis, after discussing the chief views on the subject, the author shows

that, while writers are almost unanimous as to the usual site of the bleeding, namely, the anterior part of the septum, they are not agreed as to the cause. He maintains that the mucous membrane of the septum is not more vascular than that of the turbinates, that it is not thinner than that of the other nasal walls, and that it is not more firmly adherent to the underlying structures. The cause of septal hæmorrhages, in his opinion, is that the anterior part of the septum is much more frequently exposed to injuries, especially in cases of rhinitis sicca anterior, in consequence of the formation of crusts.

The erosions originating in rhinitis sicca anterior either heal or lead to polypoid excrescences (bleeding polypus of the septum), or pass more deeply, and give rise to ulcerative processes.

The stages in the formation of perforating ulcer of the septum, according to Siebenmann, are:—1. Rhinitis sicca anterior. 2. Traumatic erosion. 3. Deeper ulceration of the mucous membrane. 4. Perforation.

The injury to the septum caused by rhinitis sicca anterior also exposes the patient to infection, which may be conveyed by the finger-nails, dirty handkerchiefs, or the inspired air. Michelson and others have proved that tubercular infection can only take place when the bacilli are unusually abundant in the nose, or when its mucous membrane has been injured. Heryng also considers that nasal tuberculosis is due to local infection, predisposing causes being catarrhal conditions of the mucosa, formation of crusts, dryness, and erosions due to the finger-nail. In the majority of the cases published the cartilaginous septum has been the seat of disease. Of six hundred and twenty-one patients in the Basle Polyclinic with diseases of the nose, five had nasal tuberculosis. In all of these the site was identical with that of rhinitis sicca anterior, and the clinical histories showed that formation of crusts had preceded the swelling of the septum.

Primary syphilis of the nasal mucous membrane may also be a consequence of rhinitis sicca anterior. In the twenty-seven cases of primary syphilis of the nose collected by Seifert, the septum was affected in several.

The author is also convinced that erysipelas of the face, which usually starts from the nose, finds its entrance at a spot on the cartilaginous septum where the mucous membrane has been eroded in consequence of rhinitis sicca anterior.

The so-called idiopathic phlegmon of the nasal septum may possibly have a similar origin.

Rhinitis sicca anterior is diagnosed by a varnished-like appearance of the septum, with formation of dry crusts, and scabs which adhere firmly to the mucous membrane; when this condition has been long present the glossy covering is coloured with blood (xanthosis of Zuckerkandl). Erosions are seldom absent. When the covering mentioned is softened and removed the surface of the mucosa is found to be traversed by fine, shallow depressions and folds. There is no infiltration unless one of the infective diseases above referred to is present. When there is a considerable loss of tissue the edges of the ulcers are not raised and do not slope steeply; if there is a perforation the edge presents a gradual thinning; in tuberculosis and syphilis, on the other hand, there is infiltration of the floor of the ulcer and of the edges.

The treatment of acute rhinitis sicca anterior should be undertaken as soon as possible: when it becomes chronic a return to the normal condition is not to be looked for. No permanent success has followed the transplantation of normal ciliated epithelium (Czerny). The patient should soften the crusts several times daily and cover the affected area with zinc or Hebra's ointment, containing ten per cent. of subnitrate of bismuth. In other cases, especially in children, yellow or white mercurial ointment has been of service.

*A. B. Kelly.*

**Rethi, L.** (Vienna).—*Mishaps after Nasal Operations*. "Archiv für Laryng. und Rhinol.," Band IV., Heft 3.

AFTER a nasal operation it is not uncommon for the patient to suffer from headache, vomiting, fever, fainting, angina lacunaris, transient amaurosis, delirium, epileptic seizures, and increase of reflex neurosis already present. Reflex phenomena which have not hitherto existed may also be produced, *e.g.*, attacks of sneezing, spasm of the glottis, vertigo, neuralgia, unilateral Graves' disease. Serious mishaps occur exceedingly rarely, *e.g.*, infection of the wound in the nose leading to erysipelas, phlegmon and diphtheria, to pyæmia and septicæmia, or to meningitis.

The following is a case of this nature which was observed by the author. A man, aged sixty-two, had been troubled with nasal obstruction for several years. When first examined by Rethi both nasal fossæ were found completely filled with mucous polypi. On that (July 15th) and the two succeeding days a number of the growths were removed. The patient was allowed to rest on the 18th. On the two following days more polypi and a great part of the degenerated mucous membrane covering the middle turbinates were removed.

On the 21st the patient complained of headache, and there was a slight rise of temperature. Two days later he entered the hospital and his condition was as follows:—He lay still, rousing himself only when called. Temp., 38·8. Left pupil did not react to light; the right, slowly. Left naso-labial fold almost obliterated. Right arm partially paralyzed; at the elbow-joint, painful. On the right thigh above the knee, a red, elevated area two decimètres in diameter, the periphery being yellowish brown. A similar spot below the right patella and right inguinal region, and another area on the ulnar side of the right forearm. He swallowed easily. Urine contained albumen and blood casts.

On the 25th his temperature was 38·2, and his pulse weak: the red areas had faded; the paresis of the right arm had increased. That evening he died.

The *post-mortem* examination showed that there had been a pyosepticæmia, with hæmorrhagic nephritis, suppuration in the subcutaneous cellular tissue and in the joints, thrombosis of the veins of the pia mater, and purulent meningitis. It is of interest that the peripheral suppurations occurred only on the side of the body (the opposite) corresponding to the cerebral affection.

The author has found only one case of nasal polypi recorded in which after operation pyæmia set in with a fatal termination. A few cases are known, however, in which meningitis followed the applications of the galvano-cautery, especially to the middle turbinate.

The rarity of such mishaps is astonishing when we consider the intimate connection between the blood and lymphatic vessels of the nose and those of the brain; also when we take into account the number and variety of micro-organisms present in the nose. This apparent anomaly can be explained only by assuming that some unknown provision exists which protects the organism from infection.

A. B. Kelly.

**Rethi, L.** (Vienna).—*Cure of Ozoena with Electrolysis*. "Wien. Klin. Rundschau," 1897, No. 10.

THE author considers electrolysis as a specific remedy against ozoena. He relates two cases, treated with electrolysis, which were completely cured (?) in a very short time.

R. Sachs.

**Schmidt, Moritz.**—*Further Experiences in the Treatment of Irregularities of the Nasal Septum by means of Electric Savos*. "Archiv für Laryngologie und Rhinologie," Band V.

THE author considers that simple swellings of the mucous membrane and scanty remains of the pharyngeal tonsil can be gradually diminished, so that they cease to

impede the air current, by practising nasal respiration perseveringly; cartilaginous and bony projections, on the other hand, are not affected by such simple means, but demand operative procedures. Of these, electrolysis is one of the best and safest in the author's opinion, but objectionable on account of its tediousness.

During the last three years one hundred and fifty operations have been performed under the author's supervision by means of electric saws. The results obtained have been highly satisfactory.

The instruments should be boiled in soda solution. Special disinfection of the field of operation is not necessary, as it cannot be thorough. Not only should the part that is to be operated upon be thoroughly anæsthetized, but the opposite side of the septum should also be painted with cocaine in case of unavoidable perforation.

The instrument should be chosen according to the hardness and size of the deviation. In patients over twenty-five years of age, and in younger persons in whom the projection passes far backwards, the trephine is to be preferred. On the other hand, the undulating saw may be used in all who have still an apparently cartilaginous septum, and in older individuals when the change in shape only involves the anterior part of the septum. When in doubt, choose the trephine, which will carry one through in all cases—the saw sometimes cuts with difficulty or not at all, owing to an unsuspected ossification. The advantage of the saw is that the operation can be completed in one act. Very large deviations, especially when extending far back, and crests and deviations close above the floor of the nose, are best removed with the trephine.

In removing a deviation or crest the saw should describe an arc passing inwards, upwards, and outwards. The operation takes two or three seconds.

The bleeding is usually insignificant, but when troublesome the nose is plugged with gauze. If it continues longer than fifteen minutes after the application of the plug the gauze is removed, the blood cleaned out, and a very small spurting artery is usually discovered. A pledget saturated with ferropyrin is then applied to the spot, and the nasal fossa again plugged with gauze.

The wound takes about four weeks to heal, and somewhat longer if the septum has been perforated.

The objections to the method are the cost of the apparatus and the profuse hæmorrhage that occasionally takes place. The author has only had two cases of erysipelas, and in one of these the patient was to blame.

Contra-indications are: a fresh attack of rhinitis, and suppurating affections of the skin lining the vestibule.

*A. B. Kelly.*

**Vinci.**—*Eucaïne and Cocaine.* Soc. Thérapeutique. "Presse Méd.," March 20, 1897.

THE toxic dose of eucaïne for the rabbit is fifteen to twenty centigrammes; of cocaine, ten to twelve centigrammes.

*Ernest Waggett.*

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## LARYNX.

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**Colomb, B. A.**—*Rupture of Alveolar Abscess into the Larynx; Œdema of the Glottis; Laryngotomy under Difficulties.* "New Orleans Med. Journ.," Mar., 1897.

THE abscess was causing dyspnœa, sufficient to alarm, when it ruptured into the larynx, causing complete cessation of respiration. Crico-laryngotomy was

immediately performed, with a satisfactory result, a large quantity of pus being ejected. The tube was somewhat too quickly removed, and symptoms of oedema came on, which, however, yielded to treatment. The case was attended throughout with only lay assistance.

R. Lake.

**Heryng, Th.** — *On Papilloma Laryngis and its Treatment by Phenol-Sulphoricinate*. "Therap. Monats.," March, 1897.

THE first part of this paper consists of a very full and clear discussion of the natural history of papilloma of the larynx; the second part deals with treatment. Heryng divides treatment into palliative and operative; the latter into endolaryngeal operation and laryngo-fissure.

The principal palliative method is tracheotomy. This is regarded by Massei as not only palliative, but also curative; but in Heryng's experience it is palliative only.

The endo-laryngeal methods are five in number, viz. :—(1) Voltolini's sponge method; (2) tearing out or crushing the growth with blunt forceps; (3) operation with cutting instruments; (4) galvano-cautery; (5) chemical caustics.

The third is the only method worth retaining, and may be carried out by means of cutting forceps, sharp spoon, snare, or Störk's guillotine. Cutting forceps, as a rule, are the most convenient and satisfactory instruments to use. The sharp spoon or curette may be used when the growth is on the inferior surface of the vocal cord, and the galvano-caustic snare when the growth is very large, and when any other operation would cause troublesome bleeding.

Thyrotomy is only to be resorted to in exceptional cases of papilloma. When it is done, Heryng recommends the freest possible opening of the larynx (splitting of the hyoid bone, and complete division of the thyroid cartilage). He considers the application of Paquelin's cautery to be harmful. Having finished the operation, he packs the larynx with iodoform gauze; leaves this in for twenty-four to thirty-six hours; removes; and examines the whole interior of the larynx carefully to make sure that not the smallest particle of new growth is left.

Unfortunately, after any operation, however thoroughly and radically performed, papillomata frequently recur. The cautery, instead of preventing, seems rather to promote recurrence. Caustics, such as chromic acid, nitrate of silver, mineral acids, zinc chloride, and salicylic acid, have all disadvantages; even lactic acid is no exception to this rule. Disappointed with these, Heryng tried sulphuricinate of phenol, and found that it had the effect not only of, to an extraordinary degree, preventing recurrence after operation, but also in certain cases of removing the growths without previous operation.

Five cases are cited in illustration of these facts :—

Case I. M. C., aged forty, had been operated on twelve times by various doctors during two years. First seen by Heryng on October 1st, 1894. Papillomata on both vocal cords, left processus vocalis, and both aryepiglottic folds. In several sittings the growths on the vocal cords and vocal process were removed with sharp forceps, and thirty per cent. of phenol rubbed in. The growths on the aryepiglottic folds, simply rubbed with the same solution, disappeared after four applications. Phenol treatment carried on for six weeks. Voice quite clear; remained so till January 7, 1896. Very small growth found at anterior commissure; rubbed three times, disappeared; no recurrence.

Case II. Mrs. H., aged fifty-eight. Hoarseness since 1891 caused by papillomata. Seen by Heryng first in September, 1892; operated on twelve times during next two years; operation always followed by recurrence. At the thirteenth operation all growths on the vocal cords and processus vocalis were removed; parts rubbed with thirty per cent. of phenol; growths on cartilages of Santorini not operated on, simply rubbed with thirty per cent. of phenol. After

fifteen days all growths completely gone. No recurrence up to April 15th, 1896, when patient was last seen.

Case III. G. K., aged seven. Tracheotomy and laryngo-fissure had been performed and papilloma removed. Seen ten days later by Heryng, who found some of the growth still present. Removed this endo-laryngeally; painted with thirty per cent. of phenol. No return, as far as known, but patient was not long under observation.

Case IV. Boy, aged thirteen. Had been hoarse eighteen months. Papilloma found, removed, cauterized, but recurred. In October, 1895, removed by Heryng, and part painted with a thirty per cent. phenol solution. Remained well till January, 1896; then slightly hoarse. Growth, of pin-head size, found; removed; phenol applied once. Patient not seen again till July. Recurrence on same spot, size of a split pea. Without operation, this was simply painted and much reduced in size, but would not quite disappear; therefore operated, and part again painted. Cure. Whether cure will be lasting cannot yet be said.

Case V., communicated by Dr. Srebrny. K. G., aged twelve. Operated on in 1893; again several times in Berlin during 1894; again in January, 1895, and this time painted with twenty per cent. to thirty per cent. of phenol. A very small growth had to be removed in April, 1896. Remained well when last seen in September, 1896.

Papillomata on the aryepiglottic folds and cartilages of Santorini disappear under simple painting; elsewhere they must be first operated on. This is due to the nature of the epithelial covering.

*Arthur J. Hutchison.*

**Koch** (Luxembourg).—*Great Fibroma of the Larynx.* ‘Wien. Klin. Rundschau,’ 1897, No. 9.

LARGE tumour, having a pedicle, on the left side of the larynx. Operated upon with the cutting forceps of Siebenmann.

*R. Sachs.*

**Koch** (Luxembourg).—*Foreign Bodies in the Larynx, Trachea, and Bronchus.* ‘Wien. Klin. Rundschau,’ 1897, No. 5.

1. A BOY, nine years old, got a large bean in his larynx. The child became dyspnoeic. The sixth day tracheotomy was performed. The bean was shot up through the opened trachea by one coughing movement. Cured.

2. A boy six years old, eating some boiled mutton, suddenly became pale and aphonic, without any signs of suffocation. The next day symptoms of acute stenosis of the larynx; tracheotomy. A pointed bone was found on the introitus of the larynx; impossible to extract it from the wound, it was pushed into the mouth, and then taken out with the finger. Recovery.

3. A woman, forty years old, eating boiled beef, suddenly had the feeling of a foreign body in her throat; attack of suffocation passed away quickly. Patient felt well during the next two weeks. Then there appeared symptoms of asphyxia; cough, with sanguinary sputum and foetid respiration. The foreign body was seen in the trachea by the laryngoscope. Only on the eightieth (!) day after the accident tracheotomy was performed; the bone (19, 15, 7 millimètres) was shot up forcibly into the wound. Recovery after twelve days.

4. In a woman, twenty-seven years old, the author could see, after having cut through the ligamentum thyreo-hyoideum, the point of a bent pin in the interior of the larynx, the head being in the oesophagus. The point had perforated the posterior wall of the larynx. In the same way the pin had entered it was extracted. Recovery. It is remarkable that only by the digital exploration the diagnosis of the foreign body was possible.

5. A man suffering from phthisis four days before his death expectorated a

large piece of beef bone. His disease dated from one day that he was found quite drunk in a field; from this time the disease made rapid progress. Certainly it was a pneumonia *ex ingestis*, with following destruction of the pulmonary tissue. The author means that many cases of so-called phthisis may be such examples of foreign bodies without any diagnostic signs during lifetime.

6. A child, aged eight, had a small white bean in the left bronchus. Operation not allowed. Pleuro-pneumonia; death. No *post-mortem*. R. Sachs.

**Massei.**—*The Acute Stenosis of the Larynx of Children and its Treatment.* "Wien. Klin. Rundschau," 1897, No. 7.

IT is very important to know all the different reasons which are enabled to produce very rapidly a stenosis of the larynx of children. The author gives a review of all the different causes of stenosis, and recommends very highly the intubation of the trachea. R. Sachs.

**Massei.**—*Peritracheo-Laryngeal Abscess in Children.* "Rev. Hebd. de Lar., Otol., et Rhin.," Feb. 13, 1897.

THE author has been struck by a certain small number of cases, supposed to be croup, in which the introduction of the intubation tube or the performance of tracheotomy has been followed by the escape of a considerable amount of pus. The cases have been characterized clinically by an acute stenosis of the larynx in children between two and seven, accompanied by symptoms and laryngoscopic evidence of paralysis of one vocal cord. The escape of pus which has attracted the author's attention has evidently been the result of the accidental rupture or incision of the walls of an abscess pointing into the lumen of the larynx below the vocal cords. The relief of stenosis has been immediate. In more than one case considerable resistance has been experienced to the introduction of the tube, and after its forcible introduction and the unexpected escape of pus the subglottic space has been found clear. The author is inclined to regard these cases as analogous to idiopathic post-pharyngeal abscess. In the absence of *post-mortem* evidence this opinion must be based on the hypothesis that the condition is due to a purulent adenitis affecting the superior group of the peritracheal chain of lymphatic glands. Abscess in the situation of this group would undoubtedly be capable of compressing the recurrent laryngeal, which runs in immediate relation to it, and so will account for the paralysis observed. Moreover, abscess in this situation would be impossible to detect by palpation of the neck, and the most yielding portion of its surroundings would be on the side of the trachea. The point of least resistance for pus under pressure would, in fact, be about the first ring of the trachea. Although actual anatomical evidence is wanting at present, it seems probable that the pathological hypothesis afforded is sufficient to explain the phenomena. The author desires to draw the attention of the faculty to the condition, the recognition of which must be of the greatest importance from the point of view of prognosis and treatment. Ernest Waggett.

**Neumayer, H.** (Munich).—*Investigations into the Functions of the Laryngeal Muscles.* "Archiv für Laryngologie und Rhinologie," Bd. IV., Heft 3.

THIS is a long and elaborate paper, which must be read in the original by those desirous of becoming acquainted with the author's methods and observations. The following are his conclusions:—

1. The cadaveric position of the vocal cords may be greatly modified by rigor mortis.
2. The forms of the glottis produced by rigor mortis in most cases resemble that assumed during phonation. This condition is to be attributed to the action

of the "closers" of the glottis, which surpass the "openers" both in number and bulk.

3. By the author's method, which consists in making use of artificial muscular rigidity for the study of the functions of individual muscles, useful results are obtainable.

4. When one crico-thyroid muscle is paralyzed the cricoid cartilage is rotated within the thyroid, owing to the contraction of the corresponding muscle on the opposite side. In consequence, the summit of the arch of the cricoid is drawn towards the non-paralyzed side, while the plate of the cricoid passes towards the opposite side. In this way the glottis comes to occupy an oblique position.

5. The crico-thyroid muscles by their contraction enable the vocal cords to move towards the middle line of the larynx.

6. The "perverse" narrowing of the glottis observed on deep inspiration is not due to aspiration of the vocal cords by the entering air, but to the contraction of the sterno-thyroid muscles.

7. The vertical portion of the posterior crico-arytenoid muscle is chiefly concerned with the widening of the glottis, while the horizontal portion fixes the arytenoid cartilage posteriorly.

8. The closure of the glottis in the region of the arytenoid is brought about by the cartilage of Santorini and the apex of the arytenoid coming into contact with the corresponding parts of the opposite side. The bases and inner surfaces of the two arytenoids are certainly approximated, but do not meet completely.

*A. B. Kelly.*

**Roger, and Bayeux, Raoul.**—*Autopsy of a Case of Varicellous Laryngitis.* "Presse Méd," April 10, 1897.

At the Société Anatomique the case was described of an infant of six months which succumbed to hæmorrhagic varicella. Progressive dyspnoea developed during the last thirty hours of life. *Post-mortem*, the authors found gangrene of the edge of the epiglottis, a strip of slough on the free borders of the vocal cords. A crateriform erosion on the velumtous portion of the left vocal cord. A varicella spot on the mucous membrane of the left pyriform fossa.

*Ernest Waggett.*

## E A R.

**Cotterell, J. M.**—*Case of Cerebral Abscess; Trephining; Recovery.* "Scottish Med. and Surg. Journ.," April, 1897.

THE patient, a man of twenty-three years of age, was admitted to hospital on January 18th with great pain in the head, of ten days' duration. There was a history of right otorrhœa since the age of eighteen months. The discharge was intermittent, but when it did cease great headache came on, which was relieved by return of the flow of pus. This time no return of the discharge was obtained, though hot fomentations, etc., had been used as before. The pain was referred from the right ear to the posterior part of the right frontal bone. He was dazed, constantly asleep, with cerebation very slow, and moaning at times from the pain. He suffered from anorexia and foetid breath. Temperature, 101.2°; pulse, 72 to 80; respiration, 16 to 18. No tenderness on pressure, and no optic neuritis. The mastoid antrum was first opened, the pulse falling to 60, the temperature to 97.4°, and the respiration to 14; but three days later the pulse fell to 52, the temperature to 97°, and respiration to 12, with return of the pain.

A second operation was now undertaken. The lateral sinus was explored and found healthy, but an abscess found deep in the temporo-sphenoidal lobe. A tube was inserted and left in for ten days, but after five days was reinserted for recurrence of the symptoms; this time the tube was kept in for three weeks. There was slight facial palsy, which was clearing up; otherwise the patient recovered well.

The author has seen marked hebetude and mental dulness in pure mastoid disease, and he considers that, where doubt exists as to diagnosis, trephining the antrum may, by removing some of the symptoms, clear the diagnostic field.

R. Lake.

**Forns.**—*On Puncture of the Fenestra Rotunda, followed by Aspiration, in the Treatment of Labyrinthine Disease. Proposed by Dr. Botey.* "Ann. des Mal. de l'Oreille," etc., March, 1897.

THIS is a criticism of Dr. Botey's method (*vide* page 77 of the current volume of the JOURNAL OF LARYNGOLOGY) from an anatomical point of view. It appears that Dr. Botey after puncture of the membrane of the round window introduces a bent canula, directing its extremity upwards and forwards to reach the internal face of the plate of the stapes in order to enter the vestibule. The author points out that the *cul de sac* of the scala tympani of the cochlea (*i.e.*, the cavity entered by puncture of the round window) is for the most part roofed in by the first portion of the lamina spiralis, and that the narrow hiatus between this and the outer wall, seen in dried specimens, is in the fresh specimen bridged over by the basilar membrane; in fact, the passage of an instrument from the foramen rotundum to the inner face of the stapedial plate must of necessity traverse the basilar membrane and the membrane of Reissner—in a word, the canalis cochleæ must be opened and the escape of endo-lymph, as well as peri-lymph, permitted. In order to avoid this disturbance of the membranous labyrinth Prof. Forns employs a canula with two bends—one in the shaft to facilitate proceedings when the foramen lies posterior to the tympanic margin, the other at the extremity. The latter is curved, with the point turned forwards and slightly downwards. By rotation of the instrument (in the manner of a corkscrew) the point is made to penetrate the membrane of the round window, and then to travel downwards and forwards, so that the end lies free in the scala tympani. The writer does not here deal with the indications for and results of aspiration of peri-lymph, but wishes to point out certain errors in the technique as described by Dr. Botey.

Ernest Waggett.

**Gellé.**—*The Preservation of Hearing in spite of Fixation of the Stapes.* ("De la Conservation de l'Audition malgré l'Ankylose de l'Étrier." "Arch. Intern. de Lar., Otol., et Rhin.," Jan. and Feb., 1897.

IT is well known to the physicist that a membrane or a thin plate has the special property of forming a bridge by way of which sound waves may readily pass from a solid to a fluid medium.

The author maintains that it is in virtue of this inherent quality of a plate that the foot piece of the stapes acts as a sound transmitter. It is true that the stapes moves in the fenestra ovalis to the extent of one-tenth of a millimètre, and it is on this movement and the resultant labyrinthine shock that Helmholtz based his theory of audition.

From this view, however, the author dissents, and he looks upon this mobility as in the main subserving the function of regulating the labyrinthine pressure, by which the apparatus is both accommodated and protected. It is, as he points out, one of the conditions of acute hearing that the excursions of the stapes should be limited or even suppressed by the action of the tympanic muscles. The improved

transmission when the muscles are tense is no doubt due to the increased cohesion of the various links of the chain of ossicles.

By "centripetal" pressure the stapes can be experimentally carried inwards, together with the membrane and the other ossicles, and is thus brought into an artificial state of fixation. In a healthy subject this proceeding is accompanied by marked diminution of hearing power, but hearing is not by any means abolished, even temporarily.

The stapes is fixed and vibrates less readily; but, by reason of the physical properties of the thin foot-plates it still transmits the molecular vibrations of the ossicular chain to the labyrinthine fluid: the amplitude only of the vibrations is diminished.

With regard to acute hearing, the mobility of the stapes is a matter of great importance, but it is not a *sine quâ non*. Loss of mobility means the loss of accommodation and protection by the tympanic muscles, and does not mean the loss of hearing. It is, indeed, not rare to find patients with complete fixation of both stapes, who, nevertheless, retain sufficient hearing power for the ordinary purposes of conversation. As long, in fact, as the foot-plate retains the configuration of a thin plate, and does not become transformed into a solid mass, while the nerve apparatus remains intact, so long will speech be heard. This fact may often be observed in certain cases of hereditary, bilateral, gouty ankylosis. Both experiment and clinical experience show that the notion that ankylosis means complete deafness is unfounded.

The author deduces:—

(a) That Helmholtz's theory of the conduction of sound by oscillation of the total mass of the stapes, and not by the propagation of the molecular vibration of the transmitting apparatus, is incorrect.

(b) From the surgical point of view we must be prepared to find something besides mere fixation in cases of severe deafness, and must not be surprised with the unsatisfactory results of operations for mobilization. The abuse of politizerization may do much harm by loosening the cohesion of the links of the conductive chain.

The condition of the fenestra rotunda is an important element in the production of deafness. Where centripetal pressure on a movable stapes causes no vertigo, the fenestra rotunda is presumably healthy. But when vertigo follows pressure on a movable stapes, the membrane of the fenestra rotunda has probably lost its elasticity, and hearing is lost and not to be restored. With such a condition the mobilization of a fixed stapes would serve no purpose. *Ernest Waggett.*

**Mounier.**—*A New Method of Removing the Wall of the Attic.* "Arch. Int. de Lar., Otol., et Rhin.," Jan. and Feb., 1897.

THE author describes and figures a new gouge and protector for use through the intact meatus. It is only intended for small operations—more particularly those which have the improvement of hearing in view. Its consists essentially of a small protector of the Stacke type, with an upturned tip two and a half millimètres in height, and a small gouge. After introduction of the protector (the membrane and malleus already removed), the gouge is run into the two grooved channels with which the upper surface of the former is provided. The two now form one instrument, which is completely under the control of the operator, and no assistant is required. Placing the instrument in position brings the wall of bone between the upturned end of the protector and the cutting end of the gouge. The protector must now be hooked well up, drawn towards the operator, and held firm. A few light blows with the mallet on the broad end of the gouge will bring away a semicircular morsel of bone two millimètres in height. There is no danger of

slipping and wounding the promontory. A general anæsthetic is necessary. Hæmorrhage is so slight as not to interfere with the completion of the operation in one sitting. As the auricle and meatus are intact, any further manipulations of the ossicles, etc., which are required can be proceeded with without difficulty on the day after operation.  
*Ernest Waggett.*

**Muralt, V.**—*Exercise of Hearing of Deaf and Dumb Persons after the Method of Urbantschitsch.* "Correspbl. für Schweizer Aerzte," Feb. 1, 1897.

DEMONSTRATION of three children in whom the faculty of hearing had been developed by this method.  
*R. Sachs.*

**Panzer.**—*A Case of Fatal Bleeding out of the Tympanic Cavity.* K. K. Gesellschaft des Aerzte in Wien, Feb. 26, 1897.

CARIES of the temporal bone; hole in the canalis carotidus.  
*R. Sachs.*

## THE LEGION OF HONOUR FOR A LARYNGOLOGIST.

DR. A. W. DE ROALDES (New Orleans) was decorated by the President of the French Republic with this coveted order, in recognition of his ambulance work during the Franco-Prussian War. It was through an oversight that Dr. de Roaldes was not a wearer of the red ribbon years ago, but the distinction, though tardy in its appearance, has lost none of its force. In New Orleans, where our esteemed, well-known, and appreciated colleague practises, his new honour is keenly appreciated, as is shown by the enthusiastic reception of the news by all parties. We, for our part, sincerely congratulate him, and wish him health and strength to wear and uphold his new dignity.

## REVIEWS.

FESTSCHRIFT DES STUTTGARTER "ÄRZTLICHEN VEREINS zur Feier seines 25 jährigen Bestehens am 6 März, 1897. Edited by Dr. A. DEAHNA.

THIS volume, published to celebrate the semi-jubilee of the Medical Association of Stuttgart, contains thirty-six essays dealing with a large variety of medical and surgical questions. The first and second articles give a full history of the Society, with a list of members past and present, the third deals with the causes of death in Stuttgart during the eighteenth and nineteenth centuries, while the rest are of more general medical interest. Among the latter are a few dealing with affections of throat and ear.

Under the title, "Meningitis, Cerebral Abscess, Cerebral Tumour?" Dr. VON FETZER describes in detail a very obscure brain case in a hysterical subject. The chief symptom was violent pain in the top and back of head, and radiating thence to the nape of neck and both shoulders. The mental condition, the pulse, the temperature, the state of the eyes, ears,

reflexes, etc., pointed in some respects to meningitis or cerebral abscess or both, in others to cerebral tumour. Nothing, however, could be found to account for either meningitis or abscess, and no tumour could possibly have given rise to the symptoms present without having caused others which were not present. The writer gives a very complete description of the case, then considers very fully the diagnosis at different stages of the illness, and lastly the conditions found *post-mortem*. These were, first, a sero-purulent meningitis of the convexity (chiefly right); second, a spindle-celled sarcoma of the hypophysis cerebri; thirdly, a degenerating enchondroma of the right and abscess of the left lobe of the thyroid gland. The importance of this abscess in connection with the meningitis was evident *post-mortem*; but during life, although slight swelling and tenderness of the thyroid had been noted, no special attention had been paid to the condition.

Dr. WEISSENSTEIN has a short paper on *Tuberculosis of the Throat*. Primary pharyngeal tuberculosis is apparently a rare disease, but probably will not really prove to be so when latent tonsillar tuberculosis is better recognized. The secondary form is comparatively common—1: 300 to 1000 cases of phthisis. The tonsils are the most frequently affected parts, next come the arches of the palate and the velum, seldom and only slightly affected are the base of the tongue, the palate, the posterior surface of the velum palati, whilst in progressive cases the lateral portions of the pharynx and naso-pharynx are both affected. Possibly at first the affection may be unilateral, as happens in the larynx, but in advanced cases the whole naso-pharynx is affected.

Of subjective symptoms pain is by far the most striking, next is the constant inclination to hawk and cough, and lastly the *fœtor ex ore*.

Simple hypertrophied tonsils in scrofulous patients are to be excised. For ulcerated cases the most scrupulous cleanliness of the mouth is of first importance; for ulcers on the tonsils the galvano-cautery is required, for ulcers elsewhere the curette followed by lactic acid, whilst for mixed tubercular and syphilitic cases chromic acid is best. At the same time the nose, naso-pharynx (adenoids, etc.), and the general condition, diet, etc., must be carefully attended to and treated when required.

Six of the author's cases are shortly described, and a short bibliography completes the paper.

E. WEIL writes on *Hypertrophy of the Pharyngeal Tonsil*, and gives a short and concise account of present-day knowledge and opinions on the subject. He cites one case—the only case he has himself seen—in which there appeared to be a direct relationship between adenoids and tuberculosis. The patient was a girl, twelve years of age, on whom Weil operated for adenoids. The wound healed without fever, pain, etc. Ten days later symptoms of meningitis suddenly appeared, and after twelve days the child died. *Post-mortem*, general miliary tuberculosis. In discussing the snoring of these patients he suggests that the whole process of snoring may be a reflex protective arrangement to prevent too great cooling and drying of the mucous membrane of pharynx and larynx.

He is not inclined to accept the opinion that adenoids directly produce deaf-mutism, though there can be no doubt that the condition is very common in deaf mutes. With regard to the relationship of hypertrophy to stammering, he merely states that according to many authors it is present in fifty to seventy per cent. of stammerers.

Nothing new is suggested as to diagnosis.

Treatment by means of cod-liver oil, baths, iodide of iron, local paintings, etc., is as a rule useless ; forced nasal respiration sometimes does good ; but almost always operation must be resorted to.

If the hypertrophy is not too great, and is causing only slight disturbance, it may be left alone ; because the natural growth of the nasopharynx, together with the tendency to shrink about the age of fifteen, will of themselves produce the desired effect.

Weil uses anæsthetics as seldom as possible, and when they are indispensable prefers Brom-æther to any other, on account of its rapid action, its perfect safety, and the fact that the operation may be done with the patient in the upright position.

Hofrath Dr. KÖBEL has an article on *Injuries to the Membrana Tympani*, with special reference to their medico-legal importance.

Ruptures of the membrane are divided into two main classes, direct and indirect.

Direct ruptures are caused by foreign bodies perforating the membrane either from the meatus or very rarely from the middle ear (bougies and worms) ; also by chemical irritants or very hot substances (lime, turpentine, carbolic acid, hot stearin, water, etc.).

Indirect are those ruptures caused by rapid alterations in the density of the air in the immediate neighbourhood of the ear. Increased density acting from without is produced by blows on the ear, diving, explosions, caisson work, etc. As a rule, these causes produce rupture only in previously diseased membranes (atrophy, deposits of chalk, cicatrices, etc.). Increased density acting *per tubam* is due to violent coughing, sneezing, etc ; also to inflation for therapeutic purposes.

Rupture from decreased density is rare. Lastly, indirect rupture may be due to violent falls or blows on the head, with or without fracture of the temporal bone.

The diagnosis and prognosis of rupture due to indirect violence—referring chiefly to blows on the ear with the open or closed hand—are more particularly dealt with. If the injury is a simple rupture of the membrane, as a rule it heals very rapidly, and the hearing is restored to its normal ; but where commotio labyrinthi has occurred, total or partial deafness, giddiness, etc., may remain more or less permanent. Fifteen cases have been reported in which, after a box on the ear, causing rupture, suppuration set in and finally caused death.

A simple rupture which heals without complication is to be regarded as a slight injury ; a rupture complicated by commotio labyrinthi, or by suppuration, must be regarded as a grave injury ; but no opinion as to ultimate results should be given till the case has been under observation for at least three months.

Arthur J. Hutchison.

**Constantinoff-Tschernoff.** — *Clinical Researches on the Electrical Sound Reaction.* Brochure. (Geneva : Dubois, 1896.)

THIS work is an exposition of researches undertaken by the author under the direction of Dr. Wyss. The conclusions correspond sufficiently exactly with the results—new and specially interesting from the point of view of general medicine—which Dr. Wyss had arrived at by his own investigations. They are as follows :—

1. The true reaction of the auditory apparatus submitted to the passage of the galvanic current is manifested by a sound (usually a whistling or ringing of high pitch) which can be located on the musical scale.

2. The true electric reaction must not be confounded with other subjective sensations (noises) which have no equivalent on the musical scale.

3. The method best adapted to investigations on the sound electrical reaction of the auditory nerve is the external transverse binauricular method.

4. The sound reaction is obtained usually with a current of very slight intensity (fraction of a milliampère to two milliampères), unlike the conditions existing when a noise is produced (false reaction).

5. The formulæ of the electric reaction (the order of appearance of the sonorous sensation) which we have arrived at is as follows :  $KaO$ ,  $An\ 1$ ,  $Ka\ 1$ ,  $AnO$ .

6. The duration and intensity of the reaction is in direct ratio to the intensity of the current. The duration of the reaction varies, in addition, in inverse ratio to the frequency of the interruptions of the current.

7. We have only obtained the true reaction in cases of internal ear disease occurring in the subjects of hereditary syphilis. With regard to the false reaction (noises), it is frequently observed in cases of ear disease of various kinds, and even in individuals presenting no signs of aural disturbance.

8. The vertigo electrical reaction is only met with exceptionally in individuals who give the true sound reaction.

9. The existence of the true sound electrical reaction of the auditory nerve may be looked upon as an important symptom of hereditary syphilis.

10. The cause of the sound electrical reaction must be looked for in a special hypersensitiveness of the auditory nerve.

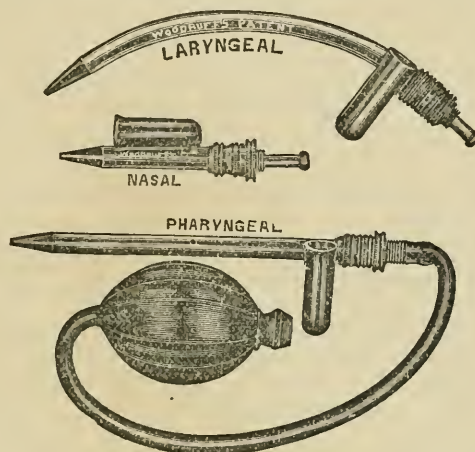
It is desirable that control experiments should be made by other otologists, and if their results correspond with those obtained by the undersigned, clinical diagnostics will be furnished with a means of diagnosis in cases of suspected hereditary syphilis, as novel as it is valuable.

*A. S. Wyss (Waggett, Trans.).*

NEW INSTRUMENT.

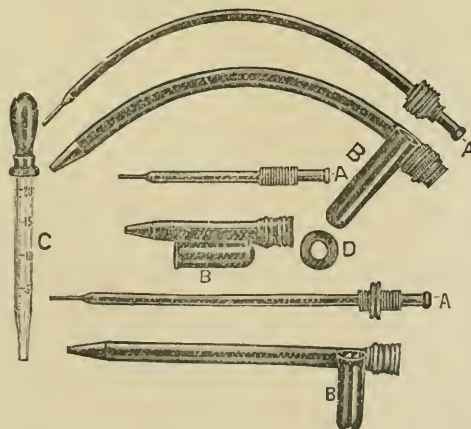
THE NEW CELLULOID SPRAY PRODUCERS. (Woodruff, Withington, Manchester.)

These are forms of spraying appliances intended for the administration and accurate use of medicated solutions or liquids in minute quantities. It possesses



several marked advantages over other spray producers intended for similar purposes, as the following particulars indicate.

Firstly : Being made of transparent celluloid, it has all the advantages of a glass apparatus, without the risk of fracture.



Secondly : It can be readily taken to pieces and the parts thoroughly cleaned without the aid of a wire or brush.

Thirdly : It is capable of being adjusted so as to produce a spray of varying degrees of fineness.

Fourthly : There is practically no waste of liquid employed, which is a desideratum when expensive medicaments, such as cocaine, etc., are used.

The three forms of apparatus shown are constructed so as to allow of the direct action of the spray on the larynx, pharynx, and mucous membrane of the nasal cavity. They can be used for oily or watery solutions. Their price brings them within the reach of all, and having no glass or other breakable compound in their composition will find ready favour with all who wish to prescribe a useful and handy instrument.

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## ANNOTATION.

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As an important supplement to our annotation on the method of preventing the dimming of glass by means of soap, we would like to add that the method finds its ideal application in the case of the lens of Siegel's suction speculum. In the use of this instrument, the annoyance occasioned by the dimming of the glass, and the trouble involved in repolishing it, are sometimes so great as to deter the practitioner from employing it as frequently as ought to be done. To those who have not tested the efficacy of the soap for the purpose described, we strongly recommend its adoption for this particular purpose.

*Dundas Grant.*

THE  
JOURNAL OF LARYNGOLOGY,  
RHINOLOGY, AND OTOTOLOGY.

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**DR. NORRIS WOLFENDEN.**

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SOONER or later in the history of every successful enterprise the time inevitably arises when those to whose initiative energy its inception was due, and upon whose fostering care so much of its subsequent growth and development depends, must, from one cause or another, entrust the guiding reins to other hands.

Ten short years since (1887) our JOURNAL was founded by Morell Mackenzie and Norris Wolfenden. Untimely death removed the former in the midst of his work, when his career appeared hardly to have reached its zenith. For some time past the latter has found it necessary for various reasons to transfer to other shoulders a large portion of the ever-increasing burden involved in editing a growing journal, the scope and importance of which has steadily advanced under his able and careful management.

The changes in our title page this month indicate the fact that Dr. Norris Wolfenden has at length decided upon completely retiring from all active participation in the editorial work of the JOURNAL, to which during ten years he successfully devoted so much time and thought and labour. The editorial staff feel keenly the loss they sustain in the retirement of a colleague whose trained experience they have learned to appreciate whilst associated with him in his work. The material loss to the editorial department is in some measure mitigated by the fact that recently its strength has been augmented by the help of several distinguished colleagues; and, moreover, the editorial staff cherish the hope that Dr. Wolfenden's kindly interest in the success of the JOURNAL, which owes so much to him, will be not less keen after the cessation of his active participation in its management than it has been hitherto.

In these regrets and in these hopes, as well as in these few expressions of indebtedness to one of its founders, the editors feel assured that they have the warm sympathy of the readers of the JOURNAL.

## SOCIETIES' MEETINGS.

### BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

*April 30th, 1897.*

Dr. MILLIGAN, *President, in the Chair.*

Dr. TRESILIAN showed the following cases :—

1. *Stenosis of the External Auditory Meatus.*

William P., aged twenty-eight. Gradual onset of deafness in left ear for eleven years. No history of any discharge or acute aural trouble. H. P. : R. E.,  $\frac{1}{8}$ ° ; L. E., C. Bone conduction good. When a young lad he used to be very fond of bathing in both fresh and salt water. The left meatus is almost completely closed by a diffuse encircling bony growth, so that the smallest possible probe could not be introduced. The right meatus was also considerably narrowed : but a probe could be introduced, and a small portion of the membrane was visible.

2. *Web Formation in the External Auditory Meatus.*

Mrs. R., aged forty-eight years. History of progressive deafness of six years' duration. A very little discharge from the left ear at the commencement. Distressing tinnitus in the same ear. A web formation was present in the left meatus, midway between the orifice and the membrane. On breaking it down with a probe and tearing it away with a forceps, the membrane could be seen beyond, perforated in the lower segment and exposing an intratympanic granulation. An interesting point was that the web formation prevented the transmission of sound outwards, as, on inflating the tympanum with the air douche and catheter, the impact of air in the tympanum, though readily perceived by the patient, was not audible through the auscultating tube. The web was renewed a week or so after it had been torn away.

3. *Hereditary Syphilis of the Nose.*

Kate G., aged fifteen years. Disease had been present for five years. The chief conditions complained of were fœtor and frequent attacks of epistaxis. There was evidence in the pharynx of former mischief in distortion of the uvula and cicatrices on the posterior wall of the pharynx. In the nose there was considerable destruction of the septum ; except a small rim in front, the cartilage had been completely destroyed, and the greater part of the perpendicular plate of the ethmoid and the vomer, and also the inferior and middle turbinals, had been eaten away. Bare bone was present in many places, and crusts and blood clots. She had

one notched incisor and a characteristic physiognomy. She was given mercury from November to the beginning of April, with little or no improvement, when iodide of sodium was substituted for mercury. There was now—in less than a month—very considerable improvement.

#### 4. *Lupus of Vestibule and Inferior Turbinal.*

The patient, a young lad aged fourteen, came first, three years ago, with lupus of the conjunctiva of the left lower eyelid. This, under frequent scrapings and caustic, and the use of arsenic, got well in about two years. He then had obstruction of the left nostril, with crusts and soreness, and also infiltration of the skin of the ala, and one small tubercle on it. The vestibule was filled with crusts, and when removed there was bleeding; after this apple-jelly formation was present, and nodules with a nibbled appearance. The disease was now nearly well, except about the middle portion of the turbinal. There had been four scrapings with a sharp spoon and the cautery had been applied twice, with a solution of lactic acid, fifty per cent., for daily use at home. Arsenic and iodide of iron were given internally. The speaker thought that the disease must have travelled down the nasal duct, and infected the lower part of the vestibule, whence it spread.

### DISCUSSION ON DR. TRESILIAN'S CASES.

#### *Case of Stenosis.*

Dr. MILLIGAN looked upon the case as originally one of periostitis of the external auditory meatus, with now a condition of marked hyperostosis. He would suggest, in the first place, the insertion of a film of lint, moistened with tincture of iodine. He thought, however, that in all probability an operation would have to be performed, and would suggest using graduated burs, so as to bur away the bone and gradually enlarge the passage.

Dr. MACNAUGHTON-JONES thought that much might be done in these cases, before resorting to operation, by adopting means to reduce the thickened dermis, and bring about gradual absorption of the periosteal thickening—as, for instance, by small laminaria stylets, and the frequent application with the cotton-wool holder or aural probe of chromic acid or nitrate of silver. Perseverance in such methods frequently obviated all need for operation.

#### *Web Formation in the External Auditory Meatus.*

Dr. MACNAUGHTON-JONES suggested that in such a case a fine galvano-cautery knife might be carried round the circumference of the membrane, thus ablating it, and securing against its recurrence. In reply to Dr. Dundas Grant he said he saw no danger whatever from this procedure. The membrane, Dr. Tresilian told him, was well in front of the membrana tympani, which was perforated.

Dr. MILLIGAN would suggest a crucial incision with a fine tenotomy knife, the folding back of the flaps thus formed, and the keeping them in position by means of a thin cylinder of sheet lead. He had had

several such cases under his care, and in all had found the treatment difficult and tedious. The power of contraction and subsequent cicatrization of the tissues was so great, that great perseverance, both upon the part of the patient and of the surgeon, was necessary, in order to secure any permanent result of a satisfactory nature.

G. C. WILKIN. *Old Case of Syphilitic Laryngitis.*

Mr. President and Gentlemen,—This case was previously shown by me three years ago. The full notes of the case, as then recorded, will be found in the fourth volume of the "Transactions," p. 14.

When you examine the larynx to-day you will see the left cord on phonation remains stationary in abduction, the right cord passing over to it. I should like to have the opinion of the Fellows on the advisability of doing anything further to alter this position. The patient breathes well and speaks well. Mercury and iodide of potash has been given internally in varying doses off and on since you last saw the case, and faradization has been used.

My own opinion is that further treatment would be useless.

W. MILLIGAN. *Case of Left-sided Frontal Empyema.*

The patient, a female aged nineteen, came under my care at the hospital, complaining of frontal headache, most marked upon the left side, and more especially over the left frontal sinus, of several months' duration. In addition, she complained of a unilateral (left) purulent nasal discharge, at times fetid, at times perfectly sweet. Her previous general health had been good, save for somewhat frequent head colds. She had had one attack of *la grippe*, and attributed her present ailment to this attack. Upon examination, a purulent discharge was seen to flow from the anterior portion of the middle meatus, and to become more pronounced when the head was bent well forwards. Pressure over the left frontal sinus produced marked pain, but no œdema of the superficial tissues was noted.

Examination with Voltolini's electric mouth lamp showed both maxillary antra to be clear and translucent. The left frontal sinus was opened according to the plan suggested by Mayo Collier, and was found full of pus. The infundibular tract was freely dilated, and a large drainage tube passed from the sinus into the left nasal passage. Daily irrigations were subsequently made. In five weeks' time the tube was removed, and the incision closed by means of sutures. Perfect recovery took place, and there has been no return of any discharge.

REMARKS ON DR. MILLIGAN'S CASE.

Dr. BARCLAY BARON (Bristol) congratulated Dr. Milligan on the rapid cure of this case, which he thought was largely due to his having made a large opening into the nose. He reminded the Fellows that he had shown a case in which an external opening into the sinus had been made by a surgeon without dilatation of the infundibulum. The discharge went on unceasingly for eighteen months, until disease did what the

surgeon ought to have done, viz., dilated the passage into the nose. Directly a stream of water passed from the outer opening into the nostril the discharge began to lessen, and ultimately practically ceased. This illustrates the necessity of always dilating freely the natural channel from the sinus into the nostril.

In answer to Dr. Barclay Baron, Dr. MILLIGAN said that he quite agreed that a *sine quâ non* was the establishment of a free drain into the nasal cavity. He was in the habit of enlarging the infundibulum and inserting a good-sized drainage tube.

In reply to Mr. Wilkin, he said that upon opening the sinus he found pus in large quantity. The mucous membrane lining the sinus appeared thickened, but he found no traces of any polypus. In cases where he had found the mucous membrane granular he had used the sharp spoon, and subsequently had made regular applications of chloride of zinc (gr. xx.—xl. to ʒi.).

Dr. MACNAUGHTON-JONES. *Esthiomenic Menstrual Ulcer of Nose.*

In recording the case that I bring before your notice this evening I am influenced by the exceptional, and, so far as I can ascertain, very rare, nature of the disease. Observing the case most closely and constantly myself for an entire year, and conducting every dressing and manipulation required during this period, for some months twice daily, I was impressed by its clinical features, the peculiar characters of which, when taken into consideration with the fact that no pathological nor bacteriological examination threw any clear light on the exact pathology of the affection, made it not only in my eyes, but in those of others who saw it, a unique one. I may at once say that it would be impossible, without considerable absorption of your time, or, indeed, for any useful purpose I could serve, either clinically or pathologically, to enter into all the details of the case while under treatment. I shall therefore confine myself to as condensed a summary as possible of the main clinical features it presented, and of the various methods of treatment adopted in bringing about the cure which has been finally accomplished.

You have doubtless been struck by the use of an old term which I have employed in the definition of the disease. "*Esthiomenous*" (from the Greek, *εσθιω*, to eat) was a term applied by the ancients (Galen and Paracelsus) to such rapidly destructive diseases as lupus and cancer, and was also applied by Alibert to *lupus serpiginosus*, as well as to *lupus exegens*.

When I describe the clinical characteristics of the ulcers that formed in this case, it will be seen that they were quite distinct in many particulars from ordinary lupus of the face or nose.

Again, I have introduced the term "*menstrual*" into the definition inasmuch as all through the history of the case, from first to last, the catamenia played a most important part in the etiology and symptomatology of the affection. I may here, in passing, refer to the fact that in 1848 the late Mr. George Critchett described in the "*Lancet*" (Vol. II., p. 661) an ulcer which he called "*menstrual*," defining this latter as "any ulcer that gives evidence of sympathy to a greater or less degree

"with the menstrual function." The corroding nature of the nasal ulcer, in conjunction with its menstrual affinity, I consider justify the differentiating definition I have adopted. Briefly, the following is the history of the case :—

In November, 1895, the patient consulted me for a small ulcer situated on the inner side of the column in the right nostril. The ulcer itself was flat, and covered with a thin brown scab. The edges were very slightly raised, and there was a red blush extending for a little distance around. She told me that it was then better than it had been a few days previously, as the menstrual period had passed over, at which time she became much worse. The nose had been affected for seven months, but in the intervals between the catamenia the inflammation subsided, recurring with each epoch, latterly with marked severity. She had used various topical remedies, of late without any effect. I may mention that this patient had been under my care a few years previously for amenorrhœa, and had from time to time suffered from erratic menstruation. The periods were still very scanty, and lasted at times for only a few hours.

The facial characteristics of the patient, the obvious obstinacy and increasing severity of the disease, added to its local features, made me at once apprehensive that the ulcer was probably of a tuberculous character, and at the outset I gave a cautious prognosis.

Carefully removing the scab, I applied a chromic acid solution to the surface, ordered an ichthyol and iodoform ointment for application, and placed her on a course of arsenic and iron, with general tonic treatment. On inquiry, I could find no trace of tubercular disease at either side of the family, save in the instance of an aunt who had had some suspicious affection of the nose, which had been treated and cured by repeated scarifications. Father, mother, and all immediate relatives were healthy. The next time I saw her the nose was decidedly improved, and I continued the treatment : but with the following menstrual period there was an exacerbation of all the symptoms—radiating pain, increase of redness, and rapid spreading of ulcer with formation of scab ; and believing the case to be of a tuberculous character, I asked Dr. Radcliffe Crocker to see it with me. He also inclined to the view that we were dealing with a tubercular ulcer. Perchloride of iron solution was, at his suggestion, twice applied to the affected area, but despite the use of various astringent and antiseptic unguents and douches, and the internal administration of tonics, cod-liver oil and thyroid extract, the affected zone increased, and the ulcer, at the menstrual period in January, 1896, put on quite typical appearances. As from first to last the ulcer in its recurrence always presented, both in its course and mature stage, the same characteristics, I shall here describe what these were. Even when late in the autumn the virulence of the affection had subsided, and recurrence took place in miniature form, these transition phases and appearances were preserved. A few days, generally three or four, before the onset of a period, the skin became irritable, red, and slightly glazed, and in the centre of the abraded part a slight brown crust formed. In the course of about forty-eight hours this redness, without much swelling, had deepened and spread. The slightly depressed centre had also extended,

and a dark and very tenacious scab, rapidly becoming blacker and deeper, formed. Now a raised margin of clear exudation, much resembling that seen in a mature vaccination vesicle, formed. In fact, the central sore presented much the same appearance as I have seen present in an unhealthy vaccination crust, with its dark scab surrounded by a rim of lymph and the red areola. This was attended by excruciating pain, generally becoming worse at night. Indeed, these nocturnal exacerbations at times occurred almost at the same hour, necessitating the use of hypnotics and occasionally of morphia injections, and the local application of sedatives. If not surgically interfered with, extension of the ulcer now rapidly threatened. There was no elevation of bodily temperature with these attacks.

In January, seeing that the disease was progressing (half of the ala was now involved), we determined to scrape the ulcer and apply an acid ; but the washleather-like character of the slough, its extreme tenacity, and incorporation with the subjacent tissue, made any attempt at scraping this felted mass impossible, and I had to shave it off with a knife, before applying the alembroth wool, which we then decided to try as a dressing. This step was repeated twice during January. It was followed by considerable improvement ; but just before the February period there was a recurrence of all the old symptoms, with rapid spreading of the inflammation and increase of this black slough, the patient, on some occasions, requiring to be held down in bed, and becoming semi-delirious from the agony which she suffered in the nose and side of the face.

I may mention that at this time the patient had given up the thyroid extract, and was taking, besides her other remedies, ichthyol. She was also given bromide in full doses immediately before the periods, and during the same time she took ergotine and muriate of hydrastia. I have omitted to say that subcutaneous injections of carbolic acid around the affected area were also tried, but apparently without any good effect.

We now had under consideration the trial of injection of tuberculin, and were taking steps for its administration, when a consultation with another distinguished dermatologist was suggested, and this caused the postponement of its application. There was no doubt that matters appeared to be going from bad to worse, and when he saw the case in consultation with Dr. Crocker and myself, the whole margin of the nose, including the column and the skin as far as the mucous membrane of the lip, was involved. Under the circumstances it was not surprising that he should take a very gloomy view of the case, regarding it as one of a cancrroid nature, akin to *cancrum oris*, and expressing the view that it would spread, and in all probability destroy the lower portion of the nose. A blush had now extended to the skin of the left nostril, and there was, from the nose itself, a sickening and most unpleasant odour.

I should remark that the upper lip of the patient was pretty freely covered with hair, and a quantity of strong hairs grew in either nostril. At the times when the recurrences took place all through the illness, the skin, especially of the right cheek, became injected and the follicles were enlarged. This subsided shortly after the menstrual period ceased.

At the consultation referred to, it was suggested to try very hot

fomentations and douching to the nose, but this caused such great pain and such alarming increase and extension of the inflammation that it had to be abandoned within twenty-four hours. As I now felt that more active operative interference was necessary, and seeing that the case was of a more distinctly surgical character, I suggested that Mr. Watson Cheyne should see the case, and this he did, in consultation with myself and Dr. Crocker.

By this time the left ala was involved, the skin of which was red and glazed, while a black scab surrounded the entire margin of the right nostril, and extended, as I have said, to the lip. He agreed that the entire slough should be cut off, and fuming nitric acid applied to the raw surface. This I did the following day, he being present, taking at the same time a triangular piece from the upper lip, and freely applying the acid here also. This was on the 7th of February, 1896, antiseptic dressings and douchings being subsequently used of boric acid and perchloride of mercury. This operation was followed by decidedly good results, but there still remained the tendency to the formation of fresh crusts, necessitating repeated dressings of a part that was exquisitely sensitive.

Mr. Cheyne had sections made and carefully examined, but there was nothing definite, save the exclusion of cancer and tubercle. Mr. Watson Cheyne saw the case once subsequently to the operation, but from this out I had undivided responsibility.

On the 14th of February, as the slough was again deepening, I removed it, and this time applied the acid nitrate of mercury. On the 24th of the same month, the skin in front of the left vestibule having broken, and a crust having here formed, I determined, after its removal, to try chloride of zinc paste, and this I did. The disease was now evidently extending to the left side of the septum, and making its way to the lip. This it finally did, despite of operative interference, much in the same manner as at the right side, ultimately necessitating an operation similar to that on the right nostril, save that I substituted chloride of zinc paste for the nitric acid, as I found the former more efficient.

I may now give a condensed account of the remaining history of this interesting case. Sections of the portions removed were examined on different occasions by Mr. Watson Cheyne, by Dr. Macintyre, and by Dr. Pegler. Those I sent to Dr. Macintyre were also examined by Prof. Buchanan of Glasgow, with the result that no evidence of tubercle or malignancy could be detected. I may read from reports of Dr. Pegler, and I have placed some sections made by him for you to look at under the microscope, from the portions removed as late as last October, when the disease recurred (as I shall describe), he being present when I removed them.

After each operative interference the surface granulated, the sore healed from the circumference, and gradually cuticle formed. During March and part of April the column was so far threatened that the cartilage of the aperture became so thin that it was quite translucent, and only a thin strip of skin remained of a few lines in thickness. The recurrence at the left side, when the part was almost healed, in March,

April, and May, took place before each menstrual period, and were each time checked by operative interference. In April I commenced the dressings which I continued to the end of the case, namely, those with salactol and chinosol. The salactol I used light applications of for a few seconds, to soften any forming crust; the chinosol I used as a wash, and nasal plug of cotton-wool saturated with a one in six hundred solution. From May 17th to October 17th no zinc paste was applied, but I hastened on several occasions the contraction and healing over of the granulating surfaces by the application of the galvano-cautery point. The column gradually grew in size, the left side healing more perfectly than the right, where at the site of the original ulcer a minute abrasion persisted. This, however, ultimately healed completely, and she passed over a menstrual period without any trouble on August the 17th. I should have mentioned that a careful examination of the uterus was made in May, and that a slight erosion of the cervix was found, which was treated by the application of nitric acid. There was then a leucorrhœal discharge. This afterwards ceased. The catamenia were encouraged by the administration of carbonate of iron and permanganate of potash, with ergot. I find that the thyroid extract was first taken between January 10th and 31st, and secondly, between March 31st and May 23rd; that ichthyol was taken between February 10th and May 23rd, and between July 18th and October 30th.

On several occasions she left London with her nurse for change of air, but remained sufficiently near to attend me. She went to the seaside from August 17th to October 16th, when, unfortunately, a recurrence took place in the right nostril on the site of the original sore. This attack again preceded a menstrual period, but I think the abrasion was due to her irritating the part with the nail during sleep. This yielded to the same treatment as that which I have already detailed—the application of zinc paste with salactol and chinosol dressings, and the subsequent application of the cautery.

For the information of those Fellows who may not have used salactol, I may say that it is a compound of hydrogen peroxide, sodium salicylate, and sodium lactate. It has been employed to destroy diphtheritic membranes, both in the form of direct application, and as inhalations, and has been given in small doses internally. Under its influence diphtheritic membranes soften and come away on the brush. Having read Dr. Wallé's report of its action on diphtheritic membranes in a number of cases, I determined to try its effects on the sloughs and tenacious scabs in this case. It certainly had the best effect of any local application I tried in softening the scabs and enabling me to remove them. Chinosol solution I have used as a disinfectant for a variety of purposes. I found it, in the proportion of 1 in 600, a most valuable antiseptic in this case, and nothing answered so well to keep the sore healthy and clean, while it decidedly encouraged the healing process.

I show these photographs of the nose, taken after it had completely healed, and they prove how perfect the reparative process has been; in fact, save on rather close inspection, no mutilation is observable, nor is there any contraction to speak of as the result of the operative pro-

cedures. The patient is at the present moment in good health, and the nose has given no trouble whatever since last November.

#### REMARKS ON DR. MACNAUGHTON-JONES'S CASE.

Dr. MILLIGAN asked if Dr. Macnaughton-Jones had made use of any inoculation experiments when trying to discover the real nature of the unique case he had so graphically described. He (Dr. Milligan) thought that in certain cases inoculation experiments were of immense value in determining whether a given process was or was not of a tubercular nature.

Mr. LAKE was disposed to consider the ulceration as due to conscious or unconscious irritation by the patient.

Dr. MACNAUGHTON-JONES, in reply, said that in answering the President's question with regard to inoculation, this had not been tried. He regarded the reports of Mr. Watson Cheyne, Dr. Macintyre, and Dr. Pegler as conclusive, and therefore negatived any idea of tubercle. Answering Mr. Lake and Mr. Braine, he had most carefully watched for each onset of the disease at the catamenial periods, and had also had the patient, who was under the constant care of a nurse, under strict supervision. Her hands, also, at these times were muffled in order to prevent any irritation of the nose during sleep. The cheek of the affected side first indicated trouble by a slight glaze, redness, and injection of the follicles; then every time the phenomena followed in the same course during their evolution. He was absolutely convinced that there was not the slightest ground for any suspicion that the patient either auto-infected herself or was responsible for the recurrences. Any such suggestion as he was happy to see Mr. Braine had now disabused his mind of, was quite erroneous.

Dr. WHISTLER. *A Supra-Glottic Growth in a Young Man.*

It was a pedunculated white mass attached to the right side of the base of the epiglottis. There were no symptoms.

Mr. LAKE. *Case of Lupus of Larynx, and Left Septum, and Inferior Turbinate*, under Dr. PIDCOCK. There was also active mischief in the lungs.

These cases are not very common if we judge from reports.

#### DISCUSSION ON INDICATIONS FOR, AND METHODS OF, OPERATION FOR POST-NASAL ADENOIDS.

Dr. GREVILLE MACDONALD:—Gentlemen,—When I was first honoured by a request from our President to open a discussion on the subject before us, the inevitable reflection was that the cumulative experience of every member of the Association upon the subject must be so enormous that the conclusion of each of us would prove identical—at any rate, so far as the indications for operation are concerned. But, on further reflection, it occurred to me that, at any rate, it would be most interesting to hear the views of our brother specialists; and therefore, as a help to eliciting opinions, I could raise no objection to placing before you the views which

guide me personally in dealing with what is, perhaps, altogether the most important ailment of childhood.

Pardon me, gentlemen, if my statements have at all any appearance of dogmatism ; for on this point—if upon no others—I find it necessary to adhere to somewhat hard-and-fast rules in dealing with these cases. I find it eases matters considerably to feel myself bound by such rules, which being the case, my statements may possibly appear dogmatic when in reality I am placing them before you for your criticism.

My first proposition is : that the actual quantity of hypertrophy of the naso-pharyngeal lymphoid tissue affords one no indication—alone—of the necessity for operation. There are cases where nose breathing may be almost an impossibility, and yet no fault can be found with the development or the general nutrition, or more local consequences—such as ear trouble, cold-taking, sore throats, sneezing, or asthma. On the other hand, as we are all fully aware, in some patients the removal of an absurdly small enlargement of the pharyngeal tonsil may induce extraordinary improvement as regards one or more of the common symptoms. Why this difference should obtain is not very easy to account for, although I am in the habit of explaining it to parents upon a theory of handicapping : one horse may be extravagantly handicapped and yet win the race, while another will be thrown out of it just because he is obliged to carry a very little more than was consistent with his physique. Similarly, one boy with a little bit of adenoids is deaf, round-shouldered, and in a constant state of catarrh—although, perhaps, with neither buccal respiration nor snoring to help the diagnosis—while his brother may snore “like the Zoological Gardens,” as a mother remarked to me yesterday, and habitually hold his mouth open, but otherwise be the picture of perfect health. Possibly upon such a hypothesis, also, may be explained the increasing necessity for the operation ; for one can scarcely believe that, were the consequences of post-nasal hypertrophy in our grandfathers so serious as they are now, they could have so long escaped recognition and treatment. As a corollary of these remarks I may formulate this rule : That the necessity for operation depends not upon the growths themselves, or their quantity, but upon the mischief they are doing ; and, as an extension of this one, may state briefly that the mistake apt to be made by the younger and more zealous operators consists in assuming that every case of adenoid growth must be submitted to the surgeon. Were this so, I do not imagine that fifty times the number of operations that at present take place in the year would suffice to effect the necessary clearance. And yet so enthusiastic am I, along with the rest of us, for the operation, that I think it would be an inestimable boon to the country at large were a compulsory examination made of all children in public institutions or elementary schools to ascertain and advise upon this subject.

Briefly then let me summarize :—

(1). Whenever there is middle-ear disease of any sort, with or without suppuration, with or without symptoms usually attributed to ankylosis, and whatever the age of the patient, every trace of adenoids should be removed, although, necessarily, in many of such cases one's prognosis must be extremely guarded.

(2) Whenever there is a constant tendency to cold-taking, or there is chronic laryngitis or bronchitis, and the patient is under thirty, we should not hesitate to operate, and that with a most favourable prognosis should the obstruction be profound.

(3) Whenever—to come to the nervous symptoms—we have paroxysmal sneezing or hay fever, spasmodic asthma or laryngismus stridulus, headaches, chorea, or epilepsy, we need not scruple to operate, although here again our prognosis must be guarded.

(4) Finally, whenever there is distinct flattening of the lower part of the thorax on one or both sides, or depression of the costal cartilages, or prominence of the sternum, we should probably be right in operating, although there may not be much indication of general malnutrition.

And here I would point out a small fact which is not appreciated by even the most enlightened general practitioners, and, I believe, not by many specialists of experience. It is this, that with a nasal obstruction the younger the patient the less pronounced invariably is the tendency to buccal respiration, and that many grave cases of adenoids in children under four—including, of course, infants—are overlooked because the child always breathes through the nose. The instinct of nose breathing is sufficiently strong to surmount serious interference with its successful performance, while the habit of buccal respiration is acquired but slowly, and I may say with difficulty. And, of course, the more persistently is buccal respiration enforced where there is nasal obstruction, the greater the mischief induced, whether in the way of thoracic malformation or deficient oxygenation. So that I would add that the absence of buccal respiration is no indication against an imperative necessity for operation.

And now as to indications afforded by the age of the patient. So far as actual interference with respiration is concerned, the younger the patient, and the more nose breathing is persisted in, the greater the necessity for operation. On the other hand, I have often thought from the observation of individual cases that the very fact that buccal respiration is so thoroughly established removes from the growths their most important menacè. The average middle-class mother is now fully alive to the importance of the symptoms of snoring and mouth breathing; but she exaggerates the mischief wrought by the latter.

As I am so often pointing out to them, it is not the mouth breathing which is harmful in most cases, but the obstructed nose breathing. No greater mistake can be made than for a parent to insist upon a child breathing through the nose when he prefers to breathe through the mouth. Personally, I have no greater crime on the conscience of my boyhood than the punishments I used to inflict upon a small brother because he would keep his mouth open and make a beastly noise over his eating. It is quite conceivable that, provided the growths attain a sufficient size and the patient a sufficient age, the chief danger of the obstruction becomes obviated, although I am fully aware that this statement will be freely challenged.

An argument commonly used is that when the patient is approaching the age at which we may hope for spontaneous atrophy, operation is not called for. In many cases this argument should have very great weight.

Provided the symptoms are comparatively insignificant and the patient appears, on the whole, to be improving rather than the reverse, I think we may safely leave the case alone, especially if we can watch its progress from time to time. But, on the other hand, I would combat by every argument in my power such a suggestion where there are grave symptoms, such as deafness, anæmia, asthma, etc., and for this reason: that generally speaking the older the patient the more guarded we find ourselves compelled to be in our prognosis. Briefly, spontaneous atrophy at the age of twenty will not give us as satisfactory results as operation at eighteen, just as operation at sixteen would probably have been still more satisfactory. This is a view which, I believe, is endorsed by all specialists.

In all cases we have to bear in mind the fact that probably a good many of our worst cases would, if left alone, have improved enormously, for we cannot but be struck with the fact that it is not infrequent for older patients to assure us that they were frequently or always deaf as children, but that now they hear perfectly. And yet we should bear this in mind: we must remember the grave risk the patient may be incurring by leaving the obstruction alone during those years when he needs all the oxygen he can be given, all the health he can acquire, and when he commands a power of rehabilitation such as he will never subsequently enjoy.

We must remember, also, that it is by no means certain that because we can see or feel some slight enlargement of a pharyngeal tonsil, that it must be considered as necessarily pathological, and that it is impossible to determine where the normal ends and where the morbid begins. I invariably make it my aim to impress this point very forcibly upon my students, in order that they may learn to judge each case upon its own merits.

There is just one other class of case worth referring to, which would not be comprised under any of the remarks I have made. These are, for the most part, individuals whose singing voices are of consequence, whether professionally or merely for their friends or themselves. Whenever I find in a singer a small hypertrophy of the pharyngeal tonsil, even when it is of absolutely no pathological importance, I have no hesitation in urging removal; and I think I can, without exaggeration, affirm that I have never operated in such a case without the results being remarkable, more especially in the direction of improving the timbre of the head notes.

As regards the second division of our subject—of the methods of operation—I am very unwilling to speak. I doubt if on this point discussion can prove of any value, for the evidence gained thereby would necessarily appear to an outsider strangely conflicting. The essential point in the successful performance of the operation lies in the operator's belief in his own methods being incomparably superior to those of any other practitioner!

The method of operating is of little consequence provided it is thorough and rapid. The more thorough it is, the less the risk of a second operation being ever required, and the more rapidly it can be

performed the more superficial can we allow the degree of anæsthesia to be maintained. And upon the latter point, I believe, depends very largely the safety of all such procedures.

Dr. DUNDAS GRANT continued the discussion, dealing with the various forms of instruments to be used, the position of the patient, and the nature of the anæsthetic, preferring the upright position and the administration of nitrous oxide as a general rule.

Mr. LENNOX BROWNE: Few will be disposed to disagree in the main with the very full and explicit statements of the two Fellows who have opened this discussion, and all will be in accord with Dr. Greville Macdonald, that knowledge of the subject of adenoids has arrived at such a stage that it is no longer necessary to repeat with detail indications for operation which are now generally accepted. I also agree with him that the actual methods to be adopted, or preference for a particular instrument for removal of these vegetations, must always be largely controlled by the individuality of the operator and by the exigencies of the case. The bold surgeon may find a thorough sweeping with the curette, followed by an equally thorough sweeping with the finger-nail, sufficient. Another using the forceps may, perhaps, be equally successful. While a third, whether he use curette, finger-nail, or forceps, or even all three, failing to grasp the nettle firmly, may simply irritate to fresh growth a portion not removed, to be described by him as a recurrence.

Readily admitting that a second operation may occasionally, though rarely, be necessary, it must be conceded that oft-repeated "recurrence"—as it is, in fact, erroneously called—almost invariably indicates an incomplete previous removal.

I do not think one often meets with a case in which there is any considerable mass of growth without symptoms, and it is rare to find spontaneous disappearance.

Personally, I put aside all questions of age as an indication for operation; for, on the one hand, I have operated on a child six weeks old, the subject of constant infantile bronchitis, of whom I heard the other day, at the age of nineteen, as never having since suffered from her throat or chest. On the other hand, I have seen many cases which have appeared to start into activity at this particular period of life, for I have operated with advantage on patients almost at middle life, and this particularly where chronic non-purulent otitis has been the cause of application.

Especially have I seen many cases between the ages of twenty and thirty years, and I am no believer in the placing of parents in a fool's paradise by assuring them that their children will grow out of adenoids on the arrival of puberty or adult age. As a fact, it is safer to warn them that their children will grow into their symptoms.

In this connection it is dangerous to admit as other than exceptional, continuance of symptoms after complete removal; we must simply insist that after-treatment is of more importance in regard to this affection than is generally taught if we are to cure mouth breathing and to re-educate palsied muscles.

Without doubt there are many cases of the lymphatic diathesis in which the adenoid development appears to lie dormant, to be stimulated

into activity by an attack of some infectious fever. An instance of this occurred to me only last week, in a young lady aged twenty-two, engaged as a teacher in a high school. She had been attacked with diphtheria two years previously, and until that time had manifested no symptom of nasal obstruction.

Examination showed the cause to be adenoids, and removal of them promises to remedy a condition of aprosexia which was materially interfering with her duties.

I have said that the time appears to have gone by for repeating obvious facts, but each day is acquainting us with new ones. It would therefore behove every laryngologist to carefully note all symptoms, with a view of recording new indications. When I say new, I mean particularly those which have not yet been published; for it is exceedingly difficult to determine what is really new, and instances of the downfall of claims to originality, are of almost daily occurrence in every branch of science.

In recalling, therefore, to the memory of the Fellows a few conditions due to adenoids which I have personally noted at various meetings of this Association, I do not desire to unduly insist on any priority of observation, albeit I shall confine myself to those which, so far as I am aware, had not been previously published. In November, 1890, I drew the attention of this Association to two cases which suggested that adenoids might be a possible factor in the formation of laryngeal papillomata in children, the growths themselves being the result of the catarrh, hyperæmia, and irritation brought about by mouth breathing; the very same factors, indeed, which account for the majority of laryngeal neoplasms in the adult.

At the same meeting the discussion turned on the association of adenoid growths with laryngismus stridulus, and I referred to a communication which I had recently made to the "*British Medical Journal*" (February 15th, 1890), in which I expressed "a tolerably sure conviction" that in almost every case of laryngismus, as well as in those of tetany "and convulsions, the subject would be found to be a mouth breather; and that, if sought for, adenoid growths would always be discovered." I believe the same fact to exist with regard to rickets. Notwithstanding that the editor of that journal, in a leading article subsequently published (March 29th, 1890), "refused to subscribe" to this view, it is one which, in the short interval of seven years, has been so very generally recognized as to be to-day alluded to by Dr. Greville Macdonald as if it were classical. Only last week a child was sent to me by his medical attendant for the removal of adenoids, in whom the only symptom was that of laryngismus.

I may also usefully allude to the presence of adenoids, not only as a strong predisposing cause of diphtheria and other infectious fevers liable to attack the throat, but also as to the beneficial effects of their removal, even in the acute stages of these diseases, as a preferable alternative to a probable tracheotomy or intubation, when the upper air passages are obstructed by their presence.

I alluded just now to aprosexia, and all the Fellows must be aware that the general practitioner was, and even is, inclined to look upon this

indication for the removal of adenoids as a purely fanciful one. Indeed, I was once told by a medical friend that in thus attempting to explain that children are dunces from no fault in their own wills, I was occupied in as transcendental a task as that of demonstrating that there is no such thing as globus hystericus without an objective cause. But these facts also are now generally conceded.

I am equally anxious to point out that the relation between aprosexia and nasal obstruction in the young is strongly confirmed by cases which are occasionally seen in the adult.

Another indication for removal of adenoids was first alluded to in this Association by Farquhar Matheson, although previously noted by me—and doubtless by others—in daily practice, namely, their etiological relation to stammering. It is interesting, however, to observe that although in rare instances the impediment to speech may be at once relieved for a day or two after the adenoids have been removed, yet the cure will not be permanent unless the hampered muscles of respiration and of the palate and the back of the throat are educated by exercises directed to the restoration of their full activity.

Lastly, I would briefly refer to reflex sexual irritations which are caused by adenoids.

This is not new, for John N. Mackenzie wrote about it so long ago as 1884, quoting even from ancient writers in support of his thesis.

I quite forget at the present moment who was the first to suggest adenoid growths as a cause for nocturnal enuresis, but I have seen several cases of this in my own practice; but I think priority may be claimed for the suggestion that masturbation in the young subject might also be due to the same cause.

It is now some years ago since, in a debate in this Association, I said, during a discussion on a case of Woakes, that I would believe in the record by a skilled observer of almost any abnormal state, however remote, as a reflex of nasal obstruction; and, perhaps, some of you may now be inclined to say that in this last instance I have carried my credulity to its ultimate.

However, I confidently anticipate its confirmation now that attention has been drawn to it, as well as to that of other indications for the removal of naso-pharyngeal hypertrophies, which when first announced would have appeared equally remote from probability.

In conclusion, I would emphasize what has been already said as to the beneficial influence of removal of adenoids on a form of nasal disease recognized by skilled observers, and spoken of by Moure of Bordeaux, as the purulent form of *ozæna*, and also on the value of their removal as a first step to the cure of acute suppurative otitis, as well as on the diminution of the risks of cerebral complications in the same circumstances.

Mr. STGEORGE REID referred to the great improvement often effected in articulation in young children who have had adenoid growths removed. In three cases recently under his care this had been very marked, the speech, which had been unintelligible, rapidly improving and finally becoming normal.

Mr. BARK preferred the patient in the recumbent position, with the head hanging over the table during the anæsthesia of nitrous oxide. He found this position minimized the cyanosis and struggling, prolonged the period of anæsthesia, and was much more convenient for the operator.

Dr. MACNAUGHTON-JONES remarked that it was now some eighteen years since he had occupied the columns of the "Medical Press and Circular" for nearly three months with a full translation of Loewenberg's brochure on adenoid tumours and their effects on respiration, phonation, and hearing. This work had appeared a few years after the classical description of them by Meyer. He had been working amongst adenoids and following the literature of the subject ever since; but he really believed that there was little worth knowing that had been added to the information contained in that brochure. All the unfortunate consequences of this most serious affection of childhood—so far as the respiratory troubles, the difficulty of pronunciation and displacements of the consonants, the defects in the hearing—were there fully noted. His one rule was—no matter from what cause he had any reason to suspect an adenoid growth in the naso-pharynx—to examine for it, and, having discovered it, to remove it. He made no exception. As to the method of removal, everyone calling himself a surgeon should be able to operate for adenoids. It was not so much a question of the instrument as of the hand that was behind it. There was a tendency to sneer at the operation for adenoids; and no doubt this was correct where such operation resolved itself into so-called slight "scraping" operations. He believed that recurrence of adenoids, after a thoroughly performed operation, was extremely rare. He had removed them from a child said to have been operated upon three times previously. On the other hand, it was ridiculous to pretend that there was no danger in the operation. There was no one who had operated several times for adenoids who had not occasionally had a few extremely anxious moments. Deaths had occurred after the removal of adenoids, but they had not been published. As to the anæsthetic, he generally operated under gas and ether; but he left the question of the anæsthetic to the anæsthetist.

There was another very important question, upon which he would like an expression of opinion from Drs. Dundas Grant and Greville Macdonald—as to their practice when enlarged tonsils complicated adenoid growths. Did they operate on both at the same time? He wished to endorse what had been observed with regard to the hæmorrhagic diathesis. He had operated upon a member of a family of "bleeders," from whom he also removed at the same time a turbinal; and the hæmorrhage, which was only stopped by plugging, was most alarming. He deprecated the introduction of any fanciful correlations between adenoids and such remote reflex contingencies as sexual excitation. He believed that all such discussion brought the entire surgery of adenoids into disrepute.

Mr. WYATT WINGRAVE deprecated the general use of chloroform or ether for the operation. He considered a major anæsthetic an unnecessary risk, and drew attention to the fact that in less than three years upwards of twenty fatalities had occurred with its use. Nitrous oxide he found to afford ample time for the effective removal of tonsils

as well as adenoids. He questioned the value and the expediency of mixing oxygen with nitrous oxide.

With regard to recurrence, he disliked the use of the term, for it implied re-growth—an extremely doubtful possibility in a purely vestigial structure. Completely removed faucial tonsils did not recur. Probably in those cases which demanded a second operation, small islands of adenoid tissue had been left, and subsequently enlarged. He emphasized the importance of treatment preliminary to the operation, especially nasal cleansing.

Dr. BARCLAY BARON (Bristol) spoke of the question of the anæsthetic to be used in these cases. He stated that he always used chloroform or ether, the latter only if the anæsthetist considers the cardiac conditions demand it, and in the recumbent position. He places the patient well over on the right side, with the head hanging over the edge of the table, and never has any trouble with blood or growth finding its way into the larynx. He has employed nitrous oxide gas and oxygen in about twenty cases in the upright position, and in one of them blood flowed into the air passages so rapidly as to give him a good deal of anxiety—in fact, more anxiety than he has had with some hundreds of cases where chloroform had been administered.

He laid great stress on the importance of always employing an anæsthetist of experience, and, if possible, of special experience in these particular cases.

Dr. NOURSE : I have listened with considerable interest to Dr. Baron's remarks, particularly as my own experience of anæsthetics for operations on adenoid growths points in an opposite direction.

I have to admit, however, that my experience in the matter has been entirely one-sided, for I have never used any other anæsthetic for this operation than nitrous oxide gas, either alone or followed by a few inhalations of ether, if a longer anæsthesia is desired, the patient being in the sitting posture.

With this mode of producing anæsthesia the results have been most satisfactory. The only cases in which trouble has occurred were those of very young children with enlarged tonsils as well as adenoids, when occasionally, after the mouth had been fixed widely open with a gag, the tongue fell back, closing the already narrowed airway, and respiration became seriously obstructed. Apart from this, I have never known the anæsthetic give trouble. There is no increased hæmorrhage, and any blood which does not flow from the mouth or nose is swallowed by the patient—none enters the trachea.

Finally, I believe I am correct in saying that with this method there has never been a fatality.

Dr. MILLIGAN begged to thank the openers of the discussion, in the name of the Society, for having kindly consented to lay their views before the Fellows of the Association. He had been much interested in what both they and subsequent speakers had said, and thought that the discussion had been an eminently practical and useful one.

In his own practice one of the main indications which he looked to as necessitating the removal of adenoid vegetations was the state of the

ear. In cases of dry catarrh, slight retraction of the membrane—a sign of an imperfectly ventilated middle ear—seemed to him an objective sign of the first importance, and an indication for radical interference. In suppurative cases he always looked upon an examination of the naso-pharynx as of prime importance, and he was glad to endorse all that Mr. Lennox Browne had so ably said. He was sure that many practitioners, in dealing with cases of suppurative middle-ear disease, more especially chronic cases, under-estimated the important rôle played by the tissues in the naso-pharynx, and contented themselves with ordering lotions and powders, overlooking the fact that they were treating symptoms and not the *fons et origo mali*. In many such cases of inveterate middle-ear suppuration little permanent good could be done until all excess of adenoid tissue had been removed from the naso-pharynx, and free ventilation established for the middle ears. In cases of “attic suppuration” he had found the presence of naso-pharyngeal adenoids peculiarly frequent.

As no one of the previous speakers had referred to deaf-mutism as an indication, he would like to call attention to the fact that adenoids were much more frequently found among deaf-mutes than among healthy children, and that in all cases of deaf-mutism a careful examination of the naso-pharynx should be made, and adenoids removed if present, even if they existed in only small amount.

Again, he would like to call attention to the necessity of examining the naso-pharynx in cases where enlarged cervical glands were present. There could be no doubt that affections of the adenoid structures of the pharynx and of the naso-pharynx were the starting points of many cases of enlarged cervical glands, and that in such cases removal of glands was only of temporary value unless accompanied by removal of vegetations also. He would also just refer to the great probability of the adenoid structures in this situation being one of the portals of admission of the tubercle bacillus.

The question of the anæsthetic to be employed in such cases was of great importance. Personally he did not approve of nitrous oxide anæsthesia with the patient sitting in a chair, but preferred the anæsthesia produced by chloroform, *given by an expert*, the patient lying upon his back, with the head well over the end of the table.

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## THE BRADSHAW LECTURE ON SUBJECTIVE SENSATIONS OF SOUND.

*Delivered before the Royal College of Physicians of London, on November 5th, 1896.*

By W. R. GOWERS, M.D. Lond., F.R.S.

*(Continued from page 270.)*

ONE feature which promises occasionally to be of practical importance is the relation of the tinnitus to external sounds. In the majority of cases the subjective sound is heard most when there is silence—sometimes is noticed only then. Doubtless external sounds often merely

prevent its notice, although we cannot be so sure that this is all. There are cases in which external sounds increase the tinnitus, and some of these are both curious and noteworthy. There may be a peculiar hyperacusis, by which certain sounds seem especially loud and unpleasant, and seem to increase the subjective sound. Although this feature suggests central co-operation the cases present evidence of labyrinthine change. Yet such co-operation seems the only way to explain another symptom met with especially in this connection, the occurrence of an echo or repetition of the sound not always in the same pitch. A man aged seventy years, with slight reduction of hearing, not equal on two sides, experienced such an echo with musical notes and high-pitched voices; every syllable seemed repeated in a lower note, although of the same duration. I found that the sound of C<sup>3</sup> tuning-fork and higher sounds were thus repeated, but the C<sup>2</sup> was not. It seems to be impossible to explain the change of note as of labyrinthine origin. But in one case of the kind the labyrinthine affection was secondary to disease of the middle ear two years before, with lasting perforation of the tympanic membrane. A rushing sound was varied by buzzing and by an occasional sound like the ringing of several bells. Loud sounds seemed to pass straight to the middle of the head; some notes of the piano were particularly distressing, and the sound of these was repeated as an echo. Allied to this symptom is another—the addition of an abnormal quality to sounds that are heard. For instance, a peculiar clanging character was added to all sounds in a gouty patient thirty-four years of age with labyrinthine deafness and also other forms of more simple tinnitus. This may be conceived as labyrinthine, but it is often associated with a sense of discord and with increased sensitiveness, hyperacusis, which may be either peripheral or central. It is often very difficult to say to which seat the sense of discord is to be attributed. All music sounded discordant to a woman, aged thirty-seven years, who had double slight labyrinthine deafness, not equal, with simple tinnitus on the side of better hearing. On this she could hear the higher tuning-forks (C<sup>3</sup> and C<sup>4</sup>) better than the lower (C<sup>3</sup> and C<sup>2</sup>), but no note of Galton's whistle. Once she had a sudden sound as if a coach-horn were blown. These symptoms suggest that the discord was peripheral. But she also sometimes had a sudden sound as if someone had spoken to her, and the impression that this was a fact was strong for the moment, although she could never distinguish the words—a symptom which can hardly have been other than central.

I regret that time prevents me saying more on the co-operation of the centre in labyrinthine disease. The production of a morbid functional state of the centre in consequence of the impulses that reach it, which involves the addition of central sensations to those of labyrinthine origin, is a question of some importance in regard to treatment. Simple hyperacusis is not common. I have mentioned a case in which it was partial, but co-existed, strange to say, with slight deafness, the sounds which succeeded in stimulating the nerves being heard too loudly. Again, a highly cultured man, aged fifty-seven years, had slight nerve deafness on both sides, with tinnitus chiefly on the left, seldom on the right. It was like "gas escaping," and he had an occasional noise in the head described as

a "churning." But a moderate sound was heard too loudly; water poured into a bath sounded to him like the noise of a waterfall, and the voice of a person speaking was heard with unpleasant loudness, and also in a confused manner, which seemed to make it difficult to distinguish the words in spite of their loudness. It caused a distressing sense of mental strain, and sometimes a similar effect is met with of a character distinctly suggestive of temporary word deafness. I leave unnoticed the cases without sign of local disease, in which a combination of pulsating tinnitus and hyperacusis is met with in cases of general increased sensitiveness of the nervous system, when all sensory impressions are too acutely felt, and the arterial pulsations affect the nerves of the ear so as to influence consciousness.

The threads of this subject interlace in such a manner as inevitably to lead us, if not astray, at least away from the point under special consideration. I have thus been led to wander from a question of some practical importance—the induction of tinnitus by sound. It is not often well marked, especially in such tinnitus as can be reasonably regarded as labyrinthine; but such cases occur, and an important point is the beneficial influence of silence upon them.

As might be anticipated, a large proportion of the cases of aural tinnitus which have furnished the ground for these remarks were brought under my observation by the vertigo with which it is so frequently associated. But this common result of the irritation of the labyrinthine nerves is only within our survey so far as the subjective sounds are related to its occurrence. We refer the vertigo to the coincident affection of the semi-circular canals by the same morbid process which, in the cochlea and vestibule, gives rise to the subjective sounds. That we are justified in doing so by the few definite facts we possess is, I think, undoubted. The relation of the subjective sounds to the giddiness is, however, extremely variable. In current descriptions of aural vertigo it is often said that the noise becomes suddenly and rapidly louder to a culmination with which sudden intense giddiness coincides. But this relation is quite exceptional. Such increase of sound may occur, and culminate, for instance, in a sudden crash without any attendant giddiness. But a gradual increase often precedes the vertigo. In one case the increased loudness of the sound was often followed by an attack of giddiness, until he learned the effect of external silence. He found that when this had diminished the subjective sound he was safe from an attack of vertigo. This is a significant fact, although one not to be too hastily interpreted. It seems, however, to show that there is a certain solidarity, so to speak, in the labyrinthine functions for which we should scarcely be prepared by the difference in their apparent character, although it agrees with the continuity of the labyrinthine structures. Moreover, we can trace a like solidarity in the corresponding central functions, as we shall presently see. In other cases the tinnitus exists only just before the vertigo, although without any increase or culmination. But the sound may simply coincide with the giddiness and not precede it. This was the relation in several cases, with evidence of one-sided labyrinthine change, causing deafness, in which the sound was pulsating and was compared to machinery, a steam-engine,

and the like. In another case—a clergyman, aged thirty-eight years—a continuous hissing sound occurred only during attacks of giddiness, which was accompanied by nausea, and sometimes by retching. The sound and the vertigo always began together, and the sound ceased as the vertigo gradually passed away in the course of a few hours. The sound was referred to the left ear, but no permanent deafness could be discovered, although, as long as the noise lasted, in spite of the fact that it was not very loud, he had great difficulty in hearing; a strong voluntary effort was needed to enable him to discern the nature of external sounds. This peculiar difficulty, needing a mental strain to overcome it, is probably a central symptom, and is not very rare. In some other cases with definite one-sided labyrinthine deafness, a pulsating sound, compared to machinery or a steam-engine, was also limited to the vertigo. This relation is, as I have said, difficult to explain. But so also are instances elsewhere of the sudden paroxysmal effect of a process that is gradual and perhaps stationary. We have a similar phenomenon in the paroxysmal lightning pains of stationary tabes. These may occur during years, although the morbid process is unchanged. These tabetic pains are perhaps a more pertinent analogy than the sudden attacks of pain in neuralgia, because we have good reason to refer the pains of tabes to the changes at the extremity of the sensory nerves, to which also our knowledge leads us to refer the attacks of tinnitus. Doubtless causes which we sometimes can, but more often cannot, discern, determine the attack, just as changes in the weather have so potent an influence in determining the pains of tabes.

Let us leave the ear itself and turn to the centre to which its impulses pass. As I have said, in the symptoms of epilepsy we can feel reasonably sure that we have to deal solely with the features of central sounds, although we cannot limit them to that disease. These higher auditory sensations vary much in character; they may be crude or elaborate. But I am reluctantly compelled to pass by the subjective sensations which have a mental character, the hallucinations and illusions and the warnings of epilepsy which consist of a sense of spoken words. To touch upon their relations would carry us too far, and away from the region with which we have been specially concerned. They have to do with instability in the higher functional regions of the brain, as is illustrated by the fact that epileptics with such an aura are in far greater danger than others of becoming insane. The cruder auditory sensations which usher in a fit, severe or slight, deserve careful consideration. One fact, to which I have already referred, is the occasional association of a subjective sound with the sense of definite vertigo which is alone so very common a warning. In some cases the commencing central discharge mimics pure aural vertigo in a way that is alike curious and suggestive as well as often puzzling. The difficulty that is caused in diagnosis is the greater because there are cases of aural vertigo in which the suddenness and character of the disturbance produces actual loss of consciousness. These cases are quite distinct from epilepsy, and yet the superficial resemblance is close. This combined epileptic aura is another illustration of the fact of which I have just spoken—the very close connection which exists in the central processes between the two functions of the

labyrinth and also between the two symptoms which their disturbance generates. The sound which accompanies the epileptic vertigo is as simple as that which occurs in the labyrinthine form, and the fact which makes the association so difficult to understand is that all our knowledge points to the motor centres as the source of the sensation of giddiness, while that of sound is purely sensory. After all, however, the connection does but illustrate and emphasize the fact I have already mentioned—that since all the sensory impulses produced at the periphery are perceived through a related activity of the higher centre, functional processes in this must be possible, corresponding to every peripheral process; and it also illustrates the fact that the readiness with which associations are produced from the periphery must entail a corresponding central facility. The processes of the epileptic discharge seem to be sometimes quite random in their character, although they are the same, by developed habit, in successive discharges.

We have already considered the varied localization of these central sounds, but some other features deserve at least a brief mention. Even the pulsatile character of aural tinnitus may be reproduced in the centre. It is unquestionably a rare symptom, but is of great interest. In a highly complex aura which I have recorded elsewhere, a sensation of beating in the chest passed up to the head, and there became a pulsating sound, accompanied by two lights before the eyes, which approached with a rhythmical motion. We must, I think, ascribe this character to the mechanical influence of the arterial pulsations on the discharging centre. We know the influence of such pulsation upon pain, we know the susceptibility of nerve structures to mechanical influences, and we must assume that, in the process of actual discharge, all their susceptibility is raised to the highest degree. The influence is, therefore, not difficult to understand, whether the pulsatile pressure augments or hinders the progressive liberation of the nerve energy. It is not rare for the central sound to be described as “machinery,” and this generally implies pulsation. A vibrating sound compared to the noise of a faradaic apparatus (which reminds us of the vibrations already considered in relation to musical tones) was referred to the left ear by one patient as the warning of left-sided fits. Here, again, we have in a very curious degree the central reproduction of peripheral impressions.

Although the elaborate sensations of psychical character, definite words and the like, are not within my subject, I may mention that in patients with such a warning of severe attacks, the minor attacks—*petit mal*—may be characterized by a quite crude auditory sensation. In one case of the kind simple “buzzing,” referred to both ears, with obscuration of consciousness, constituted the slight attacks, while the onset of the severe seizures was characterized by a vision of figures who spoke intelligible words.

In leaving the higher centre we must, however, let it carry us again to the labyrinth. A point that is not only of interest, but will prove, I think, of practical importance, is the co-operation of the centre in determining the character of the sounds produced by labyrinthine irritation. This is not difficult to understand when we consider how disturbing to

the central structure must be constant abnormal impulses from the ear. The fact which raises this question is the frequency with which labyrinthine deafness is associated with sounds of such elaboration that it is very difficult to think that they are solely peripheral in nature. Another important question also is thus brought before us, What degree of elaboration of sound is consistent with a purely labyrinthine origin? Of course, the crude sounds, which have occupied us so much, we must regard as peripheral. On the other hand, elaborate sounds, such as a voice uttering distinct or even indistinct words, must be regarded as central. But there are other forms of tinnitus that cannot be referred with certainty to the labyrinth alone. To it, indeed, we may reasonably ascribe all sudden, simple tones, when we consider the analogy of the brief momentary sensations of pain which are experienced in tabes, and the grounds we have for ascribing them to the morbid action of the degenerated nerve endings. This applies especially to the sudden sound of a bell, which is not rare, or even to repeated bell-like sounds. But we must, I think, recognize a secondary central action in such a case as that of a woman aged forty-three years, in whom, after an attack of giddiness, bilateral tinnitus referred to the ears commenced and increased gradually. It was a buzzing sound, loudest at night. After a time there was an occasional change, for a few hours or days, to that which seemed to her just like a band of musical instruments. She described it as so distinct that, although she could not recognize the tune, she believed that if she had been acquainted with harmony she could have written down the full musical score. At times also she seemed to hear voices, and although she never could distinguish words the sound was that of a human voice, and occasionally she had seemed to hear herself called. But this was no real hallucination. She referred all these sounds to the ears, and they never seemed to her for a moment to be of external origin.

The lecturer regretted that time did not permit of his dealing with all the points he wished to. He, however, devoted a little time to the consideration of gout and tabes in their relation to the subject of tinnitus, and said he would like to utter a very emphatic protest against the readiness to invoke atrophy of the auditory nerve as the morbid state whenever labyrinthine deafness is recognized in conditions in which nerve degeneration is sometimes met with, and especially in tabes.

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#### LONDON LARYNGOLOGICAL SOCIETY.

*Next Meeting, June 9th, at 20, Hanover Square, at 5 p.m.*

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ABSTRACT OF THE LETTSOMIAN LECTURES ON  
DISEASES OF THE NOSE AND THROAT IN RELATION  
TO GENERAL MEDICINE.

*Delivered before the Medical Society of London, February 1st, 1897,*

By F. DE HAVILLAND HALL, M.D., F.R.C.P.Lond.,

Physician to the Westminster Hospital, and Joint Lecturer on the Principles and Practice of Medicine in the Westminster Hospital Medical School.

*(Continued from page 267.)*

SHAPE OF THE CHEST.

THE state of the nose and naso-pharynx has a profound influence on the shape of the chest. Any interference with free nasal respiration, whether in the nose or naso-pharynx, in early life, will give rise to a characteristic deformity. Adenoid vegetations, as being the most common cause of defective nasal breathing, are usually found to be present. At one time it was thought that enlarged tonsils were the cause of this deformity, but the observations on which this view depended were mostly made in the pre-adenoid days, and as adenoids are almost invariably associated with enlarged tonsils, it is probable that the latter usually play quite a subordinate rôle in the production of the deformity in question. That enlarged tonsils alone are capable of causing deformity of the chest is shown by two cases reported by Dr. Norman Moore.<sup>1</sup> He made a cyrtometrical drawing of the chest in each case before and some time after the removal of the tonsils, and the cup-shaped depression in the chest which was present before the operation was found to have disappeared when the second tracing was made.

My colleague Mr. Tubby<sup>2</sup> has given an excellent representation of the changes seen in the thorax. If the adenoids or other causes of nasal obstruction are removed before the bones are firmly ossified the deformity may be almost completely cured, and recovery of the shape of the chest is accelerated by the judicious employment of extension and gymnastic exercises.

DISEASES OF THE CIRCULATORY SYSTEM.

As we have already seen in connection with rheumatism, the heart may become affected with valvular disease as the result of a rheumatic tonsillitis, but it is not so generally recognized that an infective endocarditis may have a tonsillar origin. A case reported by Charrin<sup>3</sup> is a good illustration of this connection. On *post-mortem* examination staphylococcus aureus, which, during life, had been found swarming on the exudation over the tonsils, was present in the broncho-pneumonic patches and the valvular vegetations.

<sup>1</sup> "St. Bartholomew's Hospital Reports," Vol. X., p. 129.

<sup>2</sup> "Deformities: a Treatise on Orthopædic Surgery," p. 211.

<sup>3</sup> Epitome, "British Medical Journal," Vol. I., par. 287.

Dr. Dreschfeld,<sup>1</sup> in describing the path of entrance of the microbes in infective endocarditis, says: "Probably the tonsils, which are so often affected in rheumatic endocarditis, may occasionally serve as the means of entrance; and thus, again, some of the so-called 'primary cases' may be explained." Lörri<sup>2</sup> states that in four out of five cases of acute septic endocarditis which he has observed, ecchymoses have been present in the pharynx, larynx, or trachea. Loss of substance in the larynx and hæmorrhage from the pharynx, larynx, and trachea have been also met with in acute septic endocarditis.

Various cardiac neuroses are met with in patients presenting intranasal abnormalities. A sensation of weight and constriction, anginal attacks, palpitation, and giddiness are the symptoms most commonly seen under these circumstances. Tachycardia may be associated with intranasal disease. In contradistinction to tachycardia, a slow pulse may be met with in certain nasal affections. Lichtwitz<sup>3</sup> reports the case of a patient with empyema of all the sinuses, who had a pulse of twenty-eight to thirty to the minute, which became normal after treatment. Tachycardia has been observed to follow excision of the larynx.<sup>4</sup>

Besides causing tachycardia, nasal lesions occasionally give rise to irregularity in the action of the heart. Dr. Sansom,<sup>5</sup> in a discussion following the reading of his paper entitled "The Irregular Heart: a Clinical Study," read before this Society on December 12th, 1892, said "he thought that nasal and aural troubles were amongst the commonest reflexes which started the cardiac derangement."

#### EXOPHTHALMIC GOITRE.

In exophthalmic goitre, and, as we have just seen, in the allied condition, tachycardia, intranasal changes play an important part. Mr. Arthur Maude,<sup>6</sup> who recently presented his valuable series of monographs on exophthalmic goitre to the Library of the Royal College of Surgeons, has collected a series of cases in which operative interference in the nose has been carried out in cases of Graves's disease.

A case recorded by Mr. Spencer Watson<sup>7</sup> of a woman, aged fifty-four, with prominent eyeballs, great mental depression, and fainting fits, was probably one of exophthalmic goitre. There was extensive hypertrophy of both inferior turbinals, which were removed with great relief to the symptoms. Dr. Scanes Spicer<sup>8</sup> has recorded a case of incomplete Graves's disease associated with nasal polypi. The polypi were removed with the cold wire snare, and as the nasal passages gradually became pervious, the thyroidal swelling diminished and became less defined, the pulsation less, and the slight exophthalmos and tremors disappeared.

<sup>1</sup> "Allbutt's System of Medicine," Vol. I., p. 633.

<sup>2</sup> "Die durch anderweitige Erkrankungen bedingten Veränderungen des Rachens, des Kehlkopfes, und der Luftröhre," p. 58.

<sup>3</sup> JOURNAL OF LARYNGOLOGY, Vol. XI., p. 161.

<sup>4</sup> "Medical Week," February 17th, 1893.

<sup>5</sup> "Med. Soc. Trans.," Vol. XVI., p. 115.

<sup>6</sup> "St. Bartholomew's Hospital Reports," Vol. XXVIII., p. 28.

<sup>7</sup> "Med. Soc. Trans.," Vol. XV., p. 309.

<sup>8</sup> "Clin. Soc. Trans.," Vol. XXVIII., p. 265.

Over against the above cases of exophthalmic goitre successfully treated by intranasal operative procedures must be set the remarkable case of unilateral incomplete Graves's disease after removal of nasal polypi recorded by Dr. Felix Semon.<sup>1</sup>

#### ANEURYSM.

In aneurysm of the aorta, the laryngoscope is oftentimes of inestimable service in enabling the practitioner to make an early diagnosis, and consequently to allow of the institution of prompt treatment. It may be laid down as an axiom, that when the left vocal cord is immobile in the cadaveric position, pressure of an aneurysm upon the recurrent laryngeal nerve is the first thing to be thought of, and it is only after an aneurysm has been excluded that other causes for the paralysis of the laryngeal muscles need be considered. This is more especially the case in males between the ages of thirty and sixty. It must be remembered that, in accordance with Semon's law, "there is proclivity of the abductor fibres of the recurrent nerve to become affected sooner than the adductor fibres, or even exclusively in cases of undoubted central or peripheral injury or disease of the roots or trunks of the pneumogastric, spinal accessory, or recurrent nerves"; consequently, the first effect of pressure on the recurrent nerve is to cause abductor paralysis on the affected side. Now unilateral abductor paralysis presents such slight symptoms that, in the absence of a laryngoscopic examination, it is generally overlooked. Still, numerous cases have been recorded in which this condition has been observed as a symptom of thoracic aneurysm. When, however, the adductor fibres become implicated, and the cord passes into the cadaveric position, the effect on the voice is so marked that the patient feels that something is amiss with him, and consequently seeks advice. In looking over the notes of sixteen private cases of aneurysm of which I have full particulars, I find that they were all males, the youngest twenty-nine and the eldest sixty-one years of age, the average age being almost exactly forty-seven. Of these sixteen cases, in one case there was bilateral paralysis of the abductors, the left vocal cord was in the cadaveric position in eight, in five there was impaired movement (loss of abduction) of the left vocal cord, and in two the laryngoscopic appearances were normal. The right vocal cord was only affected in the case of bilateral paralysis of the abductors. The proportion of cases in which the left vocal cord was partly or completely paralyzed is, of course, much greater in my practice than in ordinary general practice, inasmuch as several of the cases consulted me on account of hoarseness, and had no suspicion that they were suffering from any serious affection. Still, this only emphasizes the importance of a laryngoscopic examination in all cases of hoarseness, and, as I have said before, a loss of mobility of the left vocal cord in a middle-aged male, especially if the cord is in the cadaveric position, should at once arouse the suspicion of an intrathoracic aneurysm. The reason why the right vocal cord is so seldom affected depends upon anatomical considerations; the right recurrent nerve winds round the subclavian artery, and is therefore situated at a considerable distance

<sup>1</sup> "Clin. Soc. Trans.," Vol. XXII., p. 233.

from the arch of the aorta. Should, however, the sac of the aneurysm involve the innominate artery the right recurrent nerve may be implicated, or the trachea may be displaced by an aneurysmal tumour in such a way that its convexity may press on the right recurrent and pneumogastric nerves, causing paralysis of the right vocal cord; or centripetal irritation of the trunk of the left vagus may act on the nervous centre, and through it upon the nerve supply to the laryngeal muscles on the right side.

I have found the combination of complete paralysis of left vocal cord due to pressure on the left recurrent nerve by malignant disease, together with the existence of valvular disease and enlargement of the heart, extremely difficult to distinguish from an intrathoracic aneurysm. In some cases it is possible to recognize the direct pressure of an aneurysm upon the trachea by means of the laryngoscope. The bulging forward of the posterior wall can be seen, and with a good light and a tolerant patient, pulsation may even be distinguished.

#### DISEASES OF THE DIGESTIVE SYSTEM.

The possibility of chronic gastric catarrh being kept up by the irritation produced by swallowing foetid secretion from the nose and nasopharynx, should be borne in mind by the physician who finds that his patient does not readily respond to the usual treatment. Whether as the result of the improvement of the general health, or from the cessation of the local cause of irritation, I have noted that symptoms of dyspepsia have disappeared after the nose and accessory sinuses have received attention. F. B. Turck<sup>1</sup> has made a careful bacteriological examination of the micro-organisms present in cases of chronic naso-pharyngitis and gastritis in the same subject, and he has found that they presented identical morphological and physiological appearances. Four cases are given in which treatment of the naso-pharynx cured the stomach also. That the stomach may be involved secondarily to the upper air passages is pretty generally agreed, but it is not so easy to prove that affections of the upper air passages may occur as a result of stomach derangements. Various theories may be propounded to explain the connection between affections of the upper air passages and diseases of the stomach. We may appeal to the theory of reflexes, or we may attribute to the ubiquitous bacillus the rôle of disturbing the functions of remote organs. In speaking of the treatment of granular pharyngitis in my book on "Diseases of the Nose and Throat," I say that "it is most important that attention should be paid to the general health of the patient. If there be any symptoms of indigestion, these should be seen to." Further experience has only confirmed what I have therein stated, and I am convinced that the state of the pharynx is much influenced by the condition of the stomach and liver.

#### DISEASE OF THE LIVER.

In connection with hepatic diseases I have only to remark that very severe epistaxis is not uncommonly an early symptom of cirrhosis of the liver, the bleeding occurring from dilated veins at the posterior part of

<sup>1</sup> JOURNAL OF LARYNGOLOGY, Vol. X., p. 158.

the nose. In a middle-aged person the occurrence of epistaxis is almost as suggestive of cirrhosis of liver as are piles. Hæmorrhages from, and ecchymoses in, the mucous membrane of the pharynx and larynx may be recognized in some cases of cirrhosis and cancer of the liver. Also in acute yellow atrophy. A recent development of throat specialism is the doctrine that a varicose condition of the veins at the base of the tongue is one of the objective causes for many subjective throat symptoms of the nature of "globus hystericus," or, as it is designated by the believers of this condition, "faucial," "pharyngeal," and "laryngeal tenesmus." A lengthy discussion which took place in the columns of the "*Lancet*" in the early part of last year has been the means of relegating lingual varix to its proper position. That an enlargement of the veins at the back of the tongue does occasionally exist I am quite ready to admit, and I will go so far as to say that in exceptional cases the enlarged veins may be called varicose; but that this condition is "an etiological factor in many "obscure pharyngeal and laryngeal symptoms" does not agree with my own observations. When I have seen engorgement of the veins in the pharynx and at the base of the tongue it has usually been associated with a state of general plethora in people past middle life, and I have found that with attention to diet and the administration of saline aperients, limiting the amount of alcohol taken, the patients have speedily improved and have not required any local treatment.

#### BRIGHT'S DISEASE.

Epistaxis is a frequent symptom of chronic interstitial nephritis, and is occasionally met with in the other forms of Bright's disease. It may be quite an early sign of granular kidney; the urine should therefore be examined in cases of abundant or frequent epistaxis. The bleeding is dependent upon the altered blood state, changes in the vessels of the Schneiderian mucous membrane, and upon the cardiac hypertrophy and increased arterial tension. In itself it is seldom an important symptom, yet it may be the direct cause of death from excessive loss of blood; usually it seems rather to relieve the patient, especially if it occurs, as is frequently the case, in patients suffering from chronic interstitial nephritis. Its chief importance in Bright's disease, however, is from a prognostic point of view. It may be the precursor of an uræmic attack, or the next vessel to give way may be one seated in a vital part of the body, as, for instance, the brain; hence the occurrence of epistaxis in Bright's disease should lead the physician to take suitable measures to lower arterial tension, and to ward off, as far as possible, the danger which threatens his patient. The exact connection between Bright's disease and œdema of the larynx is still a matter of discussion. The probable explanation is that Bright's disease determines the onset of the œdema in cases in which, under ordinary circumstances, the local irritation would have been too slight to have caused it.

#### LOCOMOTOR ATAXY.

Nasal conditions associated with tabes are rare. That there is hyperæsthesia of the nasal mucous membrane is shown by the fact that laryngeal crises can at times be elicited by irritating the nasal fossæ.

In the pharynx both the sensory and the motor nerves may be affected. All varieties of sensorial disturbance may occur, viz., anæsthesia, hyperæsthesia, and paræsthesia. On the motor side there may be paralysis, or spasm with contraction. The mucous membrane of the larynx, like that covering the pharynx, may be the seat of an anæsthesia, hyperæsthesia, or paræsthesia. On the motor side three kinds of affections are seen in the larynx as a result of tabes :

- (1) Spasm of the adductors ;
- (2) Paralysis of the abductors ; and
- (3) Inco-ordination of the laryngeal muscles.

The term "laryngeal crises" has been applied to those sudden attacks of dyspnœa in tabid patients, due either to spasm of the adductors or paralysis of the abductors ; or what, perhaps, most frequently occurs is a mixed condition—that is to say, in addition to the spasm of the adductors there is some loss of power, or even paralysis, of the abductor muscles.

As a rule laryngeal crises do not occur until the tabid symptoms are well established, but they may represent the earliest symptoms of the disease. The attacks come on quite suddenly, and consist of fits of coughing, resembling whooping-cough. Dyspnœa accompanies the attacks, and in exceptional cases the spasm is so prolonged that the patient becomes cyanosed, and death has occurred under these circumstances.

In the second variety of tabid laryngeal affection, which is by far the most common form, there exists a paresis or paralysis of the vocal cords more or less permanent in nature. Out of seventy-one cases of tabid patients suffering from laryngeal paralysis, collected by Burger,<sup>1</sup> in forty-three cases there was either unilateral or bilateral paralysis of the abductors. Hence paralysis of the abductors is *the* paralysis of tabes.

The last-mentioned of these laryngeal affections of tabes is a true ataxy of the vocal cords, and is perhaps one of the earliest laryngeal signs of tabes.

#### SYRINGOMYELIA.

The condition of the larynx in this disease has received very little attention in this country. Dr. Gowers<sup>2</sup> mentions the fact that paralysis of one vocal cord has occurred, but says nothing more on the subject. Cartaz<sup>3</sup> has, however, carefully examined seventeen cases of syringomyelia, and states that in nearly one-half there was either a sensory or a motor modification.

In four cases there was abolition of reflexes, in seven paræsthesia or anæsthesia, in five paralysis in one vocal cord, in three paralysis of the posterior crico-arytenoid muscle, once with most distinct atrophy of the vocal cord, and once with paralysis of the recurrent.

Weintraud<sup>4</sup> has reported two cases of syringomyelia with isolated unilateral abductor paralysis. This is of especial clinical interest as a

<sup>1</sup> "Die Laryngealen Störungen bei Tabes Dorsalis."

<sup>2</sup> "Diseases of the Nervous System," 2nd Edit., Vol. I., p. 577.

<sup>3</sup> JOURNAL OF LARYNGOLOGY, 1895, p. 773.

<sup>4</sup> "Centralblatt für Laryngologie," Vol. XI., p. 658.

precursor of complete paralysis of the vocal cord, because in general it runs its course without giving rise to any symptom. In one of the cases there was also paralysis of the trapezius.

Laryngeal crises, such as occur in tabes, have not been observed.

#### PARALYSIS AGITANS.

Observations on the condition of the larynx in paralysis agitans have been made by Dr. Müller<sup>1</sup> and A. Rosenberg.<sup>2</sup> The former describes the speech of a patient of seventy-two as being tremulous and interrupted by intervals of silence. Charcot<sup>3</sup> compares the articulation of a person with paralysis agitans to that of a bad rider trying to talk when mounted on a high-trotting horse.

Müller observed that the passage of the vocal cords from the phonatory into the respiratory position was interrupted by two or three spasmodic movements of incomplete adduction. On agitation or prolonged speaking there were convulsive movements in the larynx during respiration. In the case described by A. Rosenberg, there was a difficulty in emitting a prolonged sound, and above all in maintaining the sound at its initial pitch, the voice always tending to fall. Laryngoscopically, the cords were seen to approach promptly; but they did not maintain this position long. At another time the cords did not appear to obey the will immediately—there was a relatively long interval between the command and the commencement of phonatory adduction.

#### LABIO-GLOSSO-LARYNGEAL PARALYSIS.

Loss of the pharyngeal and laryngeal reflexes may be an early symptom. Kussmaul reports two cases in which this symptom was present some months before any paralytic affection appeared. Owing to the loss of the laryngeal reflex foreign bodies may enter the larynx and cause attacks of suffocation, or give rise to broncho-pneumonia. The loss of reflex action is due to motor changes, as there is no loss of sensibility in the affected parts.

According to Dr. Gowers,<sup>4</sup> though paresis of the laryngeal muscles is frequently met with, "laryngeal palsy rarely becomes complete, and it "is still rarer for the power of abduction to be specially lost, common as "abductor palsy is in some other forms of central degeneration."

A fair number of cases of abductor paralysis are, however, to be found in the various laryngological journals; sometimes both sides are affected, but more commonly the paralysis is unilateral.

#### EPILEPSY.

Dr. Ten Siethoff<sup>5</sup> has reported two cases of reflex epilepsy of nasal origin cured by intranasal treatment. The second case was accompanied by an olfactory aura. Similar cases have also been recently reported by Dr. Crossfield and Mr. Barclay John Baron.<sup>6</sup>

<sup>1</sup> "Charité Annal.," Band. XII., S. 267, 1887. "Centralblatt für Laryngologie," V., p. 76.

<sup>2</sup> "Berliner Klin. Woch.," 1892, No. 31. "Centralblatt für Laryngologie," X., p. 46.

<sup>3</sup> "Principles and Practice of Medicine," Fagge and Pye-Smith, 3rd Edit., Vol. I., p. 715.

<sup>4</sup> "Diseases of the Nervous System," 2nd Edition, Vol. II., p. 566.

<sup>5</sup> JOURNAL OF LARYNGOLOGY, Vol. IX., p. 468.

<sup>6</sup> "Brit. Med. Journ.," 1896, Vol. I., p. 698.

Lichtwitz<sup>1</sup> has seen epileptiform convulsions attended with loss of consciousness resulting from irrigation of the right sphenoidal sinus, and in a boy of ten, crises resembling *petit mal* were cured after the removal of pus from the sphenoidal sinuses.

Kjellman<sup>2</sup> (Stockholm) has collected fifteen cases of epileptiform convulsions which ceased after the cure of the following pathological conditions of the nasal cavities: polypi, foreign bodies, and swelling of the mucous membrane of the turbinated bones.

The cases to which I have directed your attention are reported by observers in different countries, and they all agree in describing cases of epilepsy as originating from various nasal lesions, and that cessation of the epileptic attacks has followed upon cure of the disease of the nose. It is consequently the bounden duty of the medical man called in to treat a case of epilepsy, to make a thorough examination of the nose and accessory cavities. The tonsils may also be the exciting cause of epileptiform crises, as shown by a case recorded by M. M. Boulay,<sup>3</sup> of Paris.

The patient was a boy, twelve years old, who had suffered for two years from nocturnal crises, with the following characteristics: sudden awakening with anxiety, tingling of tongue, loss of consciousness, and convulsions of tongue, lips, face, and often of the four limbs, with embarrassed respiration and threatened asphyxia; the whole attack lasting five to ten minutes. The child had immense tonsils and adenoids. From the day on which the tonsils were removed, the attacks ceased and never returned; the adenoids were removed later.

#### HYSTERIA.

The neuromimetic conditions affecting the upper air passages are so numerous that I can only briefly describe some of the most important. It has been stated that a regular attack of hysteria may be produced by the irritation of certain parts of the nasal mucous membrane—the so-called hysterogenetic zones—and that after the application of the galvano-cautery to these areas the attacks have ceased to occur. Though I have been examining the interior of noses for the last twenty years, and have constantly used the probe, I have never succeeded in starting off an attack of hysteria. The motor neuroses of the pharynx may be due to spasm or paralysis. The so-called globus hystericus is nothing more or less than spasm of the pharyngeal muscles. Hysterical paralysis of the muscles of the pharynx may, by causing dysphagia, give rise to the suspicion of malignant disease, especially if the patient is middle-aged; the diagnosis is readily effected by means of the œsophageal bougie. A curious condition to which the term “inspiratory spasm,” or perverted action of the vocal cords, has been applied, is occasionally seen in hysterical persons. In this affection the voice remains normal, but on attempts at inspiration the vocal cords instead of separating approximate in a convulsive manner. Sometimes they come in contact, and cause grave interference with respiration; at other times they remain in the

<sup>1</sup> JOURNAL OF LARYNGOLOGY, Vol. XI., p. 160.

<sup>2</sup> “Brit. Med. Journ.,” 1893, Vol. I., Epitome No. 489.

<sup>3</sup> JOURNAL OF LARYNGOLOGY, Vol. XI., p. 28.

cadaveric position, giving rise to inspiratory stridor. Another form of spasm is the "barking cough of puberty."

#### NEURASTHENIA AND MELANCHOLIA.

The subject of the various reflex nasal neuroses has received much attention of late years, and there has been a tendency, I think, to exaggerate the effect of the various intranasal lesions. As I frequently examine the nose of patients, no matter what their complaint, I have come across numerous instances of deflected septa, nasal crests and spurs in patients in whom there is no symptom of any nasal or reflex nasal affection. On the other hand, there is no doubt that these same conditions in neurotic or neurasthenic patients would produce symptoms of a reflex character, curable by local treatment in conjunction with suitable general treatment. Some patients become quite hypochondriacal as to the state of the nose, and are constantly craving for an application of some kind or the other to be made to it. I have recently had under my care a lady, forty years of age, who on account of paroxysmal sneezing "suffered many things in the way of removal of "bone, cautery, etc." She certainly lost the sneezing, but since it disappeared she has suffered from flatulent dyspepsia, acidity, intestinal catarrh, and constipation, accompanied by neuralgia and various sensations referred to the pelvic viscera. She has lost flesh, is terribly depressed, and is a typical example of neurasthenia. She dates all her present symptoms from the time she ceased to sneeze, and attributes them to the shock of the numerous and severe operative procedures carried out in her nose. Her medical man takes the same view, and I am disposed to agree with him.

#### HEADACHE.

There is hardly any nasal affection but has headache for a symptom. Hence a careful examination of the nose and accessory cavities should be carried out before headache is regarded as being of a neurasthenic or neuralgic origin. Chief among the nasal causes of headache may be mentioned hypertrophy of the turbinals, giving rise to nasal stenosis; deflection of the septum may also have a similar effect. Furthermore, I should here like to direct attention to the pain referred to the nape of the neck, and the occipital region radiating towards the ear, which is met with in some pharyngeal affections.

#### MENINGITIS AND CEREBRAL ABSCESS.

The close proximity of the nasal passages to the base of the brain would naturally lead us to suspect that inflammation of the membranes of the brain and cerebral abscess would result from intranasal lesions, and experience has fully confirmed this idea.

Great caution must be exercised in the removal of necrosed portions of bone situated above the middle meatus; no force should be employed, and the close proximity of the brain must be borne in mind. The use of the galvano-cautery in the nose, and especially in the naso-pharynx, has been followed by meningitis, as also the operation for the removal of adenoid vegetations. New growths, especially those of a malignant

nature, may, by extension, invade the cranial cavity and set up meningitis. One of the dangers of plugging the nostril for epistaxis is the possibility of thereby causing meningitis. I have seen this happen.

An important point in regard to the occurrence of acute meningitis as a result of intranasal lesions, is that the intracranial symptoms often come on very insidiously, and the nasal disease may be overlooked, the meningitis being attributed to some other cause. I would, therefore, insist on the importance of a routine examination of the nose in all cases of suspected inflammatory mischief of the brain or its membranes.

Dreyfuss,<sup>1</sup> of Strassburg, has discussed at length the whole subject of diseases of the brain and its membranes as a result of nasal suppuration.<sup>2</sup>

#### CEREBRAL HÆMORRHAGE AND EPISTAXIS.

When called upon to advise on a case of nose bleeding in a person over forty years of age, I always think of the remarks made by Mr. Prescott Hewett in a presidential address given at the Clinical Society in 1873 :—

“ Severe epistaxis spontaneously occurring after the middle period of life : what apparently could be of so little importance clinically ? How little thought commonly would be bestowed on nose bleeding under such circumstances, and yet it is oftentimes the little cloud no bigger than a man’s hand.”

In these cases it is frequently a symptom of the granular kidney, the nasal hæmorrhage and the cerebral hæmorrhage being a common result of degenerate vessels and a hypertrophied left ventricle. In some of these cases, moreover, there is what Sir William Gull not inappropriately calls renal epistaxis—bleeding from the kidneys.

#### CONCLUDING REMARKS.

I have purposely refrained from saying anything about diphtheria, except when it occurs as a complication of other diseases, because the subject is too wide to be treated in an adequate manner in the time I could devote to it. Moreover, it is somewhat outside the limits I laid down for my own guidance when I commenced writing these lectures. For similar reasons I have not discussed the manifestations of tubercle, syphilis, and malignant disease in the nose and throat, as these are well described in the various text-books on the subject. The plan I proposed to myself was to group together the various affections of the upper air passages as they may occur in connection with general or local diseases, and also to point out the diseases of remote organs which may arise as a result of affection of the upper respiratory tract. A secondary object I had constantly before me was to accentuate the importance of a systematic examination of the nose, naso-pharynx, pharynx, and larynx.

I am quite conscious that I have omitted many points of interest, but the very abundance of material has rendered the task of selection a difficult one.

<sup>1</sup> “ Die Krankheiten des Gehirns und seiner Adnexa im Gefolge von Nasen-eiterungen.” (Jena : G. Fischer. 1895.)

<sup>2</sup> “ Centralblatt für Laryngologie,” XII., p. 452.

TWELFTH INTERNATIONAL MEDICAL CONGRESS.

*Moscow, August 7 (19) to 14 (26), 1897.*

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SECTION XII.B.—LARYNGEAL AND NASAL DISEASES.

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ORGANIZING COMMITTEE.

*Administrator*—Prof. agrégé E. M. STEPANOFF (Moscow).

*Secretary*—Dr. A. F. BELAYEFF (Moscow).

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The following is the programme of the proceedings of the section :

1. Suppurations of the Nasal Accessory Sinuses (except the Maxillary), their Diagnosis and Treatment. Dr. E. MOURE (Bordeaux); Dr. M. HAJEK (Vienna).
2. Cancer of the Larynx, its Diagnosis and Treatment. Prof. O. CHIARI (Vienna); Dr. G. CATTI (Fiume).
3. The Causes and Treatment of Loss of Voice in Singers. Prof. H. KRAUSE (Berlin); Dr. M. LERMOYEZ (Paris).
4. The Progress made in the Treatment of Laryngeal Tuberculosis since the last International Congress. Dr. RUVAULT (Paris); Dr. J. W. GLEITSMANN (New York).
5. Laryngo-stroboscopy. Prof. SIMANOVSKY (St. Petersburg).
6. The Use of the X Rays in Laryngo-Rhinology. Dr. J. MACINTYRE (Glasgow); Dr. MOUNT-BLEYER (New York).
7. Oesophagoscopy. Prof. V. HACKER (Innsbruck).
8. The Adaptation of Photography to Laryngology. Dr. I. R. FRENCH (Brooklyn); Dr. FLATAU (Berlin).

Besides the above it is proposed to arrange a joint meeting with the other sections on the question of Serum Treatment of Diphtheria.

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## BRITISH MEDICAL ASSOCIATION.

*Sixty-fifth Annual Meeting will be held at Montreal, Canada, on August 31st, September 1st, 2nd, and 3rd, 1897.*

## SECTION I.—LARYNGOLOGY AND OTOTOLOGY.

*President*—Dr. GREVILLE MACDONALD (London).

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*Hon. Secretaries*—Dr. A. CHRETIEN (Montreal); Dr. H. D. HAMILTON (Montreal); Dr. W. PERMEWAN (7, Rodney Street, Liverpool).

THE annual meeting will this year be held at Montreal, and it is hoped that there will be a fully representative attendance from this country.

Subjects for formal discussion will be arranged after consultation with the officers of the section in Canada, and will subsequently be announced. In the meantime the secretaries request that readers of papers will forward to them as soon as possible the name of any communication they may wish to make.

## ABSTRACTS.

## DIPHTHERIA, &amp;c.

**Dennig.**—*On the Infectiousness of Diphtheria.* "Münchener Med. Woch.," Feb. 9, 1897.

DENNIG holds that the value of antitoxin in the treatment of diphtheria is well established, but that its value as a prophylactic is doubtful. Results apparently in favour of the prophylactic use of antitoxin have been published, but little reliance can be placed in them because of the great variation in the infectiousness of different epidemics. Two epidemics of diphtheria are compared in tables, giving the families, numbers in each family, and numbers attacked in each family, with the age and sex. In Epidemic I., occurring in a village near Tübingen, twenty-nine families were attacked. These families contained one hundred and ninety-one individuals—one hundred and ten children under fifteen years, and eighty-one over fifteen years. Forty-six children and four adults were attacked. Families in which only one case occurred were seventeen (58.6 per cent.); families in which several cases occurred were twelve (41.4 per cent.). There were five deaths (10 per cent.). In Epidemic II., occurring under less favourable circumstances, in Tübingen, thirty-six families were attacked, with one hundred and forty-seven under and sixty-six over fifteen years old. There were forty-two cases—forty-one

children and one adult. Families with only one case were thirty-two (89 per cent.) ; with more than one case, four (11 per cent.). In two of these four families the children attacked turned ill on one and the same day. The mortality was 14·3 per cent. No prophylactic injection was given in either epidemic.

*Arthur J. Hutchison.*

**Dobezynski.**—*Antidiphtheritic Serum in Village and Country Practice.*  
"Deutsche Med. Woch.," Feb. 4, 1897.

A REPORT of thirteen cases of diphtheria treated with antitoxin, and of nineteen prophylactic injections.

In one case the writer had so little serum on hand that he doubts whether it could have had any influence on the disease ; in a second case the diagnosis was doubtful. Therefore, omitting these two cases, there were treated eleven cases, with one death. This occurred in a septic case (*i.e.*, a case not suitable for treatment by diphtheria antitoxin alone). Of the nineteen immunized children only one was said to have had an attack of diphtheria ; and even that was doubtful, because the illness was so slight that no doctor was called in.

Joint pains did not occur, but in one case an erythema occurred, starting from the point of injection. The effect of the serum on the general condition was most striking ; the improvement always seemed to go along with a fall of temperature. The local effect was not so marked, but only once did the membrane continue to spread. Improvement generally started with a profuse sweating.

No bacteriological examination was made, but the writer is of opinion that he can diagnose diphtheria clinically as accurately now as he could before the Loeffler bacillus was discovered.

*Arthur J. Hutchison.*

**Engel, G. S.**—*Examination of Blood as an Aid to Prognosis in Diphtheria.*  
"Deutsche Med. Woch.," Feb. 18 and 25, 1897.

IN this paper the proper methods of preparing the blood for examination, the methods of staining and the values of different stains, the classifications of leucocytes adopted by different writers, etc., are discussed in considerable detail. Only one point bearing directly on the prognosis of diphtheria seems to have been established by the author to his own satisfaction, viz. : If the myelocytes—*i.e.*, mono-nuclear white blood corpuscles, with neutrophil granules (excluding both the mono-nuclear leucocytes poor in chromatin, considered by Fränkel as characteristic of leukæmia, and also the large mono-nuclear eosinophil cells of Müller and Rieder)—are present in quantities of two per cent. or more in the blood of a diphtheria patient, the patient will die ; but a smaller percentage does not of itself justify a favourable prognosis. The highest percentages found in diphtheria patients who recovered were 1·5 per cent., 1·4 per cent., and 1·3 per cent., and these were present only at the height of the illness, sinking back very shortly to 0·7 per cent., 0·1 per cent., and 0 per cent. respectively.

The maximum of myelocytes found in the blood of those who died of diphtheria was 16·4 per cent. On the other hand, eight cases died without any noticeable increase in the quantity of myelocytes. The author cannot yet state at what day of the illness a bad prognosis may be made, but in one case in which he was able to examine the blood on the fourth day he found 12·8 per cent. myelocytes, and in another examined on the third day 4·3 per cent. myelocytes. The first case died seven days later ; the second, eighteen days later.

Interesting observations are recorded with regard to the numbers of other white cells, eosinophil cells, etc. ; but apparently no very definite conclusions can be formed with regard to them.

*Arthur J. Hutchison.*

**Gottstein, A.**—*On the Serum Treatment of Diphtheria.* "Münchener Med. Woch.," Feb. 16, 1897.

TRUSTWORTHY statistics undoubtedly prove that since the introduction of serum treatment there has been a decided decrease in the mortality from diphtheria in Germany, France, Denmark, Belgium, and a great part of Austria. This is attributed by some to the serum treatment; by others to the natural history of the present epidemic. The height of the epidemic was reached in 1883-86, and there has been a rapid, though not quite steady, decline since then.

M. Funck, chief of the institute for serumtherapy in Brussels, recently published the results obtained there with diphtheria antitoxin. In his earlier cases the mortality was 12·3 per cent. Later this was still further reduced, so that during 1895 the total mortality (in two hundred and forty cases of bacteriologically verified diphtheria) was only 7·5 per cent. The great improvement in his results was obtained by Funck only after he had commenced to preserve his serum by filtration through a Chamberland's filter.

Now, whereas the experiments of various investigators left the question unsettled whether antitoxin can pass through such a filter, L. de Martini, director of the bacteriological laboratory in Milan, has proved that it cannot do so (at least to any extent), and that to obtain a concentrated serum Funck's method must be reversed—in other words, the residue left in the filter is the concentrated serum, whereas Funck's serum, to which such brilliant results are credited, really contains little or no antitoxin at all.

*Arthur J. Hutchison.*

**Watson, A.**—*Intubation and Tracheotomy in Diphtheria.* "Glasgow Med. Journ.," April, 1897.

THIS is a very practical paper on the treatment of dyspnoea during diphtheria.

The writer classifies these cases into—

1. Those requiring intubation alone—(a) ordinary cases; (b) spasmodic cases; (c) moderate dyspnoea in infants, or in cases of extreme prostration.
2. Those requiring intubation, followed by "subsequent" tracheotomy.
3. Those requiring intubation, followed by "immediate" tracheotomy.
4. Those requiring primary tracheotomy.

In an appendix to the paper, tables are given showing the number of cases falling under each of the above headings and the points of special interest in each case.

Six cases are classed as 1 (a)—ordinary intubations; all were treated with antitoxin; intubation in nearly all cases had to be repeated (in one case seven times).

Three cases were 1 (b)—spasmodic; one introduction of the tube sufficed to remove the spasm, though in all three cases the tube was immediately expelled.

Three cases were 1 (c)—moderate dyspnoea in infants of from seven to seventeen months old. The object of intubation here was to allow the patient to die peacefully, the prostration in each case being too great to leave any hope of recovery.

Two cases came into Class 2. The tube being repeatedly expelled after repeated insertions, and the breathing continuing obstructed, tracheotomy had to be performed.

Four cases came into Class 3. In them—intubation either failing to relieve or actually increasing the dyspnoea—tracheotomy had to be performed at once.

Ten cases came under Class 4—i.e., cases in which tracheotomy, and not intubation, was indicated. In two of these no membrane was found in the trachea, and it is therefore probable that intubation would have relieved the dyspnoea.

*Arthur J. Hutchison.*

## MOUTH, &amp;c.

**Bussenius and Siegel.**—*On the Identity of the Bacterium of Foot-and-Mouth Disease in Animals and in Man.* ("Maul-und-Klauenseuche und Mundseuche.") "Deutsche Med. Woch.," Jan. 28 and Feb. 4, 1897.

THIS article commences with a short notice of the investigations into the causation of foot-and-mouth disease in both pre-bacteriological and bacteriological times. It was long well known that the disease was transferable from beasts to men. This was experimentally demonstrated by Hertwig and his two assistants in 1834. They drank large quantities of milk from a diseased cow, and all three took the disease. Inoculation experiments had proved much less successful. Feeding a sound animal with saliva from a diseased animal had long been in use as a means of spreading the disease. Bollinger was the first to prove that the materies morbi was to be found in the blood. Klein, in 1885, made cultures of streptococci from the contents of vesicles and pustules; injected these subcutaneously into sheep and obtained negative results, but obtained positive results when he fed sheep on them. Siegel, starting on quite different lines, viz., making cultures from the blood and internal organs not of beasts but of men, obtained a bacterium of the bacterium coli group; then, later, found the same bacterium in the organs and blood of beasts, and also in the secretion from ulcers, pustules, vesicles, etc. In 1896 Bussenius cultivated from vesicles, ulcers, saliva, and, after death, from the blood and organs of a patient, W., in B. Fränkel's ward, a bacterium evidently identical with that of Siegel—a small, ovoid, slightly blue bacillus. A calf fed on this died of foot-and-mouth disease, and a pure culture of the bacillus was obtained from the blood in the heart.

Bussenius and Siegel then started their conjoint research. Their first set of experiments were conducted with the cultures obtained from the patient, W. Pure cultures of several kinds of cocci and two kinds of bacilli had to be investigated, but of them all only the above-mentioned blue ovoid bacillus produced the disease. During the course of later experiments it was found that pure cultures of this bacillus in a virulent condition were most easily got from the heart-blood and organs removed (under narcosis) before killing the animal: further, that the animals should not be more than a few days ill. (After about the eighth day experiments were frequently negative.)

Some children with the disease came under observation. Pure cultures were made from the saliva, but they lost their virulence during the long process required to get rid of other organisms. Some animals were therefore fed with saliva; two hens and a calf reacted, and pure cultures were obtained from their blood and organs. A series of outbreaks of foot-and-mouth disease occurring among cattle in the neighbourhood, permission to experiment was obtained. In all cases in which the beasts were only a few days ill the ovoid blue bacillus was obtained, and when pure cultures thereof were given to other healthy beasts (chiefly calves) the disease was produced.

For particulars as to morphological and biological characters, etc., the reader is referred to "Archiv für Laryngologie," Band VI., Heft 1.

Arthur J. Hutchison.

**Dixon, A. F.**—*On the Course of the Taste Fibres.* "Edin. Med. Journ.," April, 1897.

THE view is held by Gowers and many others that the taste fibres, passing from the anterior two-thirds of the tongue by the chorda tympani to the facial, leave the

facial at the geniculate ganglion to pass via the great superficial petrosal to Meckel's ganglion, and thence to the second division of the fifth; and that the taste fibres from the posterior third of the tongue, passing via the glosso-pharyngeal, leave it to pass along the nerve of Jacobson, through the tympanic plexus to the otic ganglion, and thence to either the second or third division of the fifth nerve. This view is objected to by the writer for various reasons. It has never been certainly established. The course is extremely complicated, involving the passage of the taste impulses through ganglia of the spinal ganglion type twice in each case (viz., of seventh and fifth, and of ninth and fifth nerves), and also through Meckel's and the otic ganglion respectively. Again, if the small nerve of Jacobson is capable of carrying all the taste fibres of the glosso-pharyngeal nerve, it is difficult to understand the sensitiveness of the posterior part of the tongue to taste impressions. These are some of the objections to the fifth-nerve theory.

Turning next to the development of these nerves, which he had carefully studied a few years ago, the writer points out that the chorda tympani is a true branch of the facial, being at first quite unconnected with the lingual. "Similarly, 'the great superficial petrosal is formed very early and is developed as an outgrowth of the cells of the geniculate ganglion. It is connected at first with the seventh nerve, and only later acquires connection with the fifth.'" Whatever impulses then pass through the chorda and the great superficial petrosal nerve respectively must reach the brain through the roots of the seventh nerve. In the same way the nerve of Jacobson is an outgrowth of the glosso-pharyngeal, and hence almost certainly carries impulses into the course of that nerve. The conclusion is, therefore, that taste impulses reach the brain by the seventh and ninth nerves.

*Arthur J. Hutchison.*

**Ombridanne and Klein.**—*Ludwig's Angina.* Soc. Anat. Paris, Jan. 15, 1897.

A MAN, twenty-six years old, was admitted into hospital for serious asphyxia, caused by phlegmonous tumefaction of the neck. Opening the tumour caused a slight discharge of pus, without modification of respiratory troubles. Tracheotomy, followed by injection of saline serum was performed. The infiltration of tissues invaded the face; the appearance of abscess was gangrenous. Death on the sixth day. By the bacteriological examination of pus, streptococci and staphylococci.

*A. Cartaz.*

**Pluder, F.** (Hamburg), and **W. Fischer** (Altona).—*Primary Latent Tuberculosis of the Hypertrophied Pharyngeal Tonsil.* "Archiv für Laryng. und Rhin.," Bd. IV., Heft 3.

THE authors first discuss the relations of scrofula to adenoid vegetations, and the implication of the lymphatics of the throat in pulmonary and laryngeal phthisis.

The work done by Lermoyez, Dieulafoy, Broca, Brieger, G. Gottstein, and Brindel in investigating latent tuberculosis of the tonsils having been reviewed, the authors pass to the consideration of a series of thirty-two consecutive cases in which they removed the hypertrophied pharyngeal tonsil.

Of these cases twenty-eight were children and four were adolescents or adults. The majority were in good condition; only two children were scrofulous. There was a history of tuberculosis in the families of half the cases, but only in three instances were the parents affected.

In five of the thirty-two cases (about sixteen per cent.) there proved to be marked tuberculosis of the hypertrophied pharyngeal tonsil, although there was nothing to lead one to suspect its presence. Not one of the patients was affected with tuberculosis, or appeared strumous; and all of them derived the benefits which usually follow the removal of adenoid vegetations. The tuberculosis was diagnosed

histologically. The microscopic examination of the tonsil after removal revealed nothing unusual. In all the cases the tubercles were found only in the mucosa, never in the submucosa; bacilli were only scantily present, and solely in the diseased parts—never in the epithelium or healthy lymph follicles. The nasal and pharyngeal mucus was always free of bacilli. The tubercles were irregularly scattered, and sometimes an entire fold of the tonsil was free, while marked and extensive tuberculosis was found in the neighbouring parts. This is an important point, for it shows that it is not easy to deny the presence of tuberculosis even after such a histological examination, and that the negative results obtained by some investigators may be thus partly explained. Distinct caseation was found in half of the cases. Sections were stained for bacilli only when tubercles had been recognized. It is possible, therefore, that Dmochowski's so-called "diffuse tuberculosis"—which he assumes does not appear alone, but associated with neighbouring tubercles—may have escaped observation.

Tuberculosis of the hypertrophied pharyngeal tonsil can no longer be regarded as very rare. The following are the results of the microscopic investigations made so far:—

|                    |     |     |                                       |
|--------------------|-----|-----|---------------------------------------|
| Lermoyez           | ... | ... | in 32 cases found tuberculosis twice. |
| Gottstein          | ... | ... | „ 33 „ „ „ 4 times.                   |
| Brindel            | ... | ... | „ 64 „ „ „ 8 „                        |
| Pluder and Fischer | ... | ... | „ 32 „ „ „ 5 „                        |

There are thus seventeen cases of undoubted primary latent tuberculosis of the pharyngeal tonsil on record. Of these, six were children, seven about the time of puberty, and four were from eighteen to twenty-six years. Ten were males, seven females. Only one child was distinctly strumous. Nine were affected with tuberculosis. There were variations as to the size of the hypertrophy, the condition of the faucial tonsils and cervical glands, and of the nasal mucous membrane, so that there was no clinical sign by which the tubercular infection could be suspected.

The authors consider that Dieulafoy was correct in stating that primary tuberculosis of the pharyngeal tonsil occurs with about double the frequency of that of the faucial tonsils.

The mode of infection, the relation of the infection to the hyperplasia, the influence of the infection on the physiological involution, and the result of the local tuberculosis when left to itself, are discussed at length.

The authors strongly recommend further histological research, both on the patient's account and to determine whether locality influences the frequency of local tuberculosis. From the therapeutic point of view, the main thing is the thorough removal of the adenoid tissue.

*A. B. Kelly.*

**Sticker, G.** — *A Simple Method of Obtaining Large Quantities of Saliva.*

"Münchener Med. Woch.," March 2, 1897.

It is often desirable to obtain saliva in quantities large enough for chemical analysis. All methods hitherto in use are either difficult to carry out or for various reasons unsatisfactory. Sticker now uses a small, fine, and carefully cleaned sponge. This is taken into the mouth dry, and is chewed, and at intervals, whenever saturated with saliva, is taken out and wrung into a receiver. In this way plenty of saliva is easily and quickly obtained.

*Arthur J. Hutchison.*

## NOSE, &amp;C.

**Bergengruen** (Riga).—*Demonstration of Pictures by Artists (taken from Life), illustrating Lepra of the Nose, Mouth, Throat, and Larynx.* Gesellsch. livland. Aerzte, Aug. 26, 1896. "St. Petersburg. Med. Woch.," 1897, Nos. 11, 12.

THE author remarks that the lepra tuberosa has four stages.

1. Stadium fluxionis et catarrhal (redness, swelling, and hypersecretion).
2. Stadium infiltrationis (growth of diffuse or nodose infiltration; intrusive paleness and dryness).
3. Stadium ulcerationis. (The nodes are softening in the middle and loosen the epithelium; at last there is a formation of ulcers. The ulcers conform themselves in every tissue, so that whole parts of organs can be destroyed.)
4. Stadium cicatrizationis et atrophica (organization of cicatricial tumours, very similar to the syphilitic cicatrices).

Generally the nose is diseased first—the larynx last. The diagnostic signs of the lepra so much resemble those of syphilis that it is very difficult sometimes to decide whether it is lepra or syphilis; only the general examination of the patient can be a help to ensure the diagnosis.

For particulars and the very interesting and detailed discussion, see original article. R. Sachs.

**Collet.**—*Olfactive Troubles in Aural Diseases.* "Lyon Méd.," Feb. 7, 1897.

THE author has frequently observed troubles of olfaction—specially notable diminishing of acute sensitiveness—in various aural diseases. These troubles are dependent upon nasal affections which appear at the same time. He believes in the sclerous forms the nasal and aural symptoms are the expression of trophic degenerations. A. Cartaz.

**Combé.**—*Maxillary Sinusitis with Tic-Douloureux.* Congrès français de Chirurgie, Oct., 1896.

THE author gives the description of a variety of maxillary sinusitis with neuralgia of trigeminal nerve, having symptoms characteristic of tic-douloureux. The perforation of the antrum and washing out are not sufficient for the relief of nervous manifestations. It is necessary to make resection of the alveolar margin and obtain recession of the osteitis. Six cases are enumerated. A. Cartaz.

**Courtaud.**—*Abortive Treatment of Acute Coryza.* "Bull. Gén. de Thérap.," Feb. 8, 1897.

COURTAUD advocates as an abortive treatment of acute coryza the irrigating with warm water—from 45° to 55° Centigrade. The syringing is easily tolerated, and in some minutes the congestion of the mucous membrane disappears, and simultaneously the tedious results of the rhinitis. A. Cartaz.

**Ewald, C.**—*Two Cases of Congenital Tumour of the Face.* "Wien. Klin. Rundsch.," 1897, No. 15.

ONLY one of these two cases is of interest to our specialty—tumour of the septum narium, about the size of a bean, having a pedicle in connection with the middle of the septum. The tumour had been there for many years; it was removed with scissors. By the microscopical examination it was found to be a congenital endothelioma. R. Sachs.

**Goure, L.**—*Meyer's Tonsil, and Bacteriology of Adenoids.* "Thèse de Paris," 1897.

THIS pamphlet on adenoids is important on account of the bacteriological examination of two hundred and one cases. The examination was practised with the most attentive antiseptic proceeding. The author has never found tubercle bacillus; yet in thirty cases the child had some collateral tuberculous relatives, in eighteen cases there was hereditary tuberculosis, and in seventeen cases there was tuberculosis of lungs or other organ.

The micro-organisms disclosed in these two hundred and one cases are: streptococcus, 37 times; staphylococcus, pure, 60; staphylococcus, with association, 69; coccus, pure, 41; coccus, with association, 94; pneumococcus, 3; leptothrix buccalis, 2.

The author concludes the adenoids are very rarely tuberculous; and, personally, he has never seen it.

*A. Cartaz.*

**Kahn.**—*Disagreeable Accidents of the Operation for Adenoid Vegetations.* "Rev. Hebdomadaire de Lar.," etc., April 3, 1897.

FOUR instances are given of the rare condition in which a bony crest on the posterior wall of the pharynx interferes with the manipulation of Gottstein's knife. In two cases the instrument became temporarily fixed in the bone. In one case, where the tubercle was removed, hæmorrhage was troublesome.

*Ernest Waggett.*

**Katzenstein, J.** (Berlin).—*Autoscopy of the Naso-Pharynx.* "Archiv für Laryngologie und Rhinologie," Band V.

THE patient lies on his back with the head hanging as low as possible. He then grasps his tongue and breathes quietly, just as if about to be examined with the laryngeal mirror. In this position the naso-pharynx is below, while the uvula is directed upwards. The soft palate is now drawn forward and downward by means of a palate hook, and the following parts are thus brought into view: the prominence of Passavant, the posterior wall and roof of the naso-pharynx, the Eustachian cushions, the mouths of the tubes, the salpingo-palatine and salpingo-pharyngeal folds, and the fossæ of Rosenmüller. The parts that remain invisible are the septum, choanæ, and posterior ends of the turbinates. By means of this method naso-pharyngeal tumours and adenoid vegetations can be operated upon, and the Eustachian tubes catheterized from the naso-pharynx under direct observation.

*A. B. Kelly.*

**Thomas, F. W.** (Philadelphia).—*Diseases of the Frontal Sinuses and their Treatment.* "Med. News," March 6, 1897.

THE author deals with the various diseases of the frontal sinuses, referring first to their anatomical relations, and pointing out that their intimate connection with the nasal cavity leads to most of the affections to which they are subject being catarrhal in character. He has found belladonna and aconite in small quantities given frequently to have the most satisfactory results in relieving the catarrhal symptoms, combining with them in some cases small quantities of strychnia.

*St George Reid.*

**Woodruff, J. S.** (Roxboro', Pa.).—*Phenacetin in Nasal Catarrh.* "Philadelphia Med. Times and Register."

THE author has found phenacetin applied locally give satisfactory results in nasal catarrh. He mentions two cases—one where a profuse nasal discharge following scarlet fever had lasted four years, and another where there was itching and dryness of the nasal passages, with frontal headache. In the first phenacetin was

administered in the form of snuff—in the second dissolved in glycerine, with success. The author does not mention what the above symptoms were due to.

St George Reid.

## LARYNX.

**Bayeux, Raoul.** — *Laryngeal Intubation, Auto-Extubation, Pathogeny, and Prophylaxis.* "Presse Méd.," Jan. 20, 1897.

A VERY interesting clinical and experimental study of the spontaneous expulsion of the tube. Bayeux concludes from an accurate analysis of the principal statistics that it is a frequent complication of intubation, and it is not possible to leave a child without an attendant. From numerous anatomical mensurations he proves that the narrowed part of the larynx is exactly on a level with the cricoid cartilage. Every tube the swollen part of which is not inserted beyond the cricoid will be easily expelled. The vocal bands do not keep the tube *in situ*; it is the stenosed part of the cricoid ring. The tube must be constructed for a convenient adaptation to that narrow part of the larynx.

A. Cartaz.

**Benda, C.** (Berlin). — *The Anatomical Examination of the Larynx in Laryngeal Stenoses.* "Archiv für Laryngologie und Rhinologie," Band V.

THE present method of slitting up the larynx behind, and pressing the walls apart, while quick and simple, does not allow of our estimating slight changes in the lumen due to swelling of the walls, exudations, or foreign bodies. In such cases the examination of transverse sections would be of great advantage. To obtain these, however, preliminary hardening is necessary.

After numerous experiments, the author is convinced that this is best effected by nitric acid and bichromate of potash. The specimen is placed for twenty-four hours in 10 per cent. nitric acid. Without washing, it is then transferred to Müller's fluid, or 2 per cent. solution of bichromate of potash. After forty-eight hours, being then thoroughly soaked, it is carefully washed. The preparations are best suited for microscopic examination after several days' washing. Freezing, or the ordinary hardening methods, may be employed to obtain microscopic sections. Flemming's mixture of water, glycerine, and alcohol in equal parts is recommended for preserving the specimens.

This method is of special value when we particularly wish to retain the relations of the parts and the form of cavities. Penetration takes place quickly, and fixation is effected in the shortest space of time; there is almost no shrinking; the natural colours are changed, but the various tissues are strongly contrasted.

A. B. Kelly.

**Brannsfeld, F.** — *Ligno-sulphite in the Treatment of Tuberculosis, specially of Laryngeal Tuberculosis.* "Deutsche Med. Woch.," April 1, 1897.

LIGNO-SULPHITE is a bright yellow, turbid fluid, with acid reaction and a penetrating smell of sulphurous acid and resin, obtained as a by-product in the manufacture of cellulose. Its active constituents are apparently sulphurous acid and benzol derivatives.

F. Hartmann in Hallein at first thought that it had a direct action on the tubercle bacilli. Heindl, working in Chiari's clinic, found that there was no direct action on the bacilli, but that the patients improved, the night sweats and temperature being reduced, and the patient feeling better. Later Hartmann appears to have come to the same conclusions.

The first effect of the inhalation of vapour of ligno-sulphite (which should be inhaled from solutions of ten per cent. to thirty per cent.) is an increase in the quantity and in the fluidity of the expectoration, with consequent increase in the ease with which it is brought away. At the same time it becomes less purulent and more serous in character. Immediate results of this are greater ease in breathing and improved appetite. In laryngeal cases cough becomes slighter and easier, dysphagia diminishes, and ulcers clean up to a certain point. Nevertheless the author found no direct influence on the bacilli, or on the tubercular process. The good effects on the process are all indirect, and due principally to the easier breathing, the better appetite, and the decreased amount of cough and dysphagia.

Arthur J. Hutchison.

**Collet.**—*Laryngeal Disturbances in "Sclerose en Plaques."* "Lyon Méd.," Jan. 24, 1897.

A MAN, twenty-four years old, with medullar affection diagnosed as *sclerose en plaques*. Besides the special signs of the disease, the patient had some disturbances of the tongue; the speech was interrupted, stuttering. The author found, with the laryngoscope, very pronounced oscillations of vocal cords; when the patient spoke they were agitated by a true tremor.

A. Cartaz.

**Fink, E.** (Hamburg).—*The Effects of Syphilis in the Upper Air Passages, and their Local Manifestations.* "Bresgen's Sammlung Abhandlungen a.d. Gebiete d. Nasen-, Ohren-, Mund-, und Hals-Krankheiten," Band II., Heft 2 and 3.

IN some of the old writings, descriptions are found of throat affections which might be regarded as syphilitic, but even the physicians of the middle ages had no idea that an etiological relation could exist between disease in the throat and that of a distant organ. The first case in which an affection of the upper air tract was recognized as a manifestation of general syphilis was that of a bishop in Posen, who died in 1382. It is related that he led a very dissolute life, and that in consequence he suffered from ulcerations of the tongue and throat, which rendered him almost unable to speak or swallow before his death.

At the end of the fifteenth century, when malignant syphilis raged throughout Europe, the connection between the exceedingly rapid destruction in the throat and corresponding changes in the genitals was so apparent as to force itself on the general attention. We find, consequently, after each outbreak of the *morbus gallicus* very correct estimates—both medical and lay—of syphilitic affections of the nose and throat.

Of laryngeal syphilis, on the other hand, all the writings from the fifteenth to the eighteenth century consulted by the author give only a very hazy conception. Morgagni was the first (1778) to describe syphilis of the larynx; his reports were based entirely on *post-mortem* examinations.

An accurate knowledge of syphilis of the upper air passages has been obtainable only since the introduction of laryngoscopy and rhinoscopy.

From the historical introduction the author passes to the consideration of the three stages of syphilis as manifested in the nose, pharynx, and larynx. The descriptions are full and interesting, but contain nothing especially new. There is a useful section on pareses of the vocal cords of syphilitic origin. Some rare cases observed by himself, including one of chancre of the tonsil, are reported. The author considers that a perforation of the palate does not always point positively to a syphilitic affection, and relates the case of a young woman who had suffered for many years from "a multiple caries of the nasal skeleton," and in whose

palate a perforation formed while under his observation. Syphilis could be excluded with certainty, and specific treatment failed.

In differentiating chancre in the nose from a tubercular ulcer the author states that the latter occurs only in those with pulmonary tuberculosis, and that the presence of tubercle bacilli prevents confusion. This is not the case; tuberculosis is frequently present in the nose without any discoverable sign of it elsewhere, and the finding of the bacilli is often a matter of extreme difficulty. *A. B. Kelly.*

**Grand, Jean.**—*Sarcomata of the Larynx.* "Thèse de Toulouse," 1896.

SARCOMATOUS tumours of the larynx are rare. Grand has collected only sixty cases. Epithelioma is, comparatively speaking, the more frequent malignant disease. Among these sixty cases he has noted three varieties—sarcoma with embryonic cells, sarcoma with fusiform cells, and myeloid sarcoma. From a clinical aspect they must be divided into infiltrating or fungating sarcomata. The symptoms and diagnosis are carefully studied, and the author advises for treatment endo-laryngeal extirpation if the tumour is well defined; thyrotomy if it is possible to make a radical and complete ablation. *A. Cartaz.*

**Grossmann, M.**—*Experimental Contribution to the Theory of the Motorial Innervation of the Larynx.* K. K. Gesellsch. der Aerzte in Wien, April, 1897.

THE author wanted to examine the position of the vocal cords after having dissected the recurrent nerves, and, further, the influence of the musculus cricothyroid. Exner constructed a special apparatus (laryngometer) to measure out the different positions of the vocal cords. The result of sixty experiments was as follows:—After section of one recurrent the glottis contracts itself; after the second nerve has been cut through there is another contraction of the glottis; but after destruction of both nervi laryng. super. the glottis opened again. So the author says that one cannot exclude from the adduction of the glottis paralysis of the positives. He mentions, further, the theories of Semon, Krause, etc., with the remark that a real cadaveric position of the vocal cords never can be noticed in lifetime. *R. Sachs.*

**Liaras.**—*A Case of Primary Œdema of the Larynx.* "Rev. Hebdomadaire de Laryngologie," etc., March 27, 1897.

THE writer narrates the case of a street hawker, who during the exercise of his vocation in cold weather was seized with rapidly increasing dyspnoea. There was no previous history of interest, and no symptoms of renal disease were to be detected. Laryngoscopic examination showed extensive œdematous swelling of the epiglottis and aryepiglottic folds, of a greyish colour. There was no rise of temperature, nor any of the signs or symptoms which characterize an inflammatory process. Symptoms were speedily relieved and cure soon obtained by the removal of a portion with the punch forceps by Moure, a proceeding which permitted the escape of serous fluid. Both in this case and in several others of a similar nature to be found in literature no causative agent other than cold and chill appears to have been present. There is a general opinion that all primary laryngeal œdemas are due to micro-organic infection; but, asks the author, may not such cases as this one be analogous to the classical form of laryngeal œdema—in other words, a traumatic œdema immediately dependent on a local vaso-motor disturbance, the result of cold? *Ernest Waggett.*

**Semon, F.** (London).—*De re publica laryngologica.* "Archiv für Laryngologie und Rhinologie," Band V.

THE fifth volume of the "Archiv für Laryngologie und Rhinologie" is dedicated to its founder and editor, Prof. Bernhard Fränkel, as a Festschrift, by his friends

and scholars on the occasion of his sixtieth birthday, and the twenty-fifth anniversary of his appointment as Docent. It contains valuable contributions from some of the leading laryngologists of the day.

Semon's article, which is the first, is made up of some fragmentary thoughts on laryngological matters of general interest.

He points out how the laryngological literature of a country partakes of the peculiarities of its general literature. Thus, German laryngological papers are distinguished by their depth and fulness of detail. British, on the other hand, aim at conciseness—which is sometimes carried too far—and emphasize the practical points, keeping theoretical questions in the background. The French laryngological literature, usually marked by lucidity and grace of diction, has, till quite recently, followed its own course almost uninfluenced by the problems which at the moment excited the interest of laryngologists in other lands. The American follows with the closest attention all the innovations abroad, adopts them in the shortest space of time, and, in keeping with the go-ahead spirit of the nation, is usually inclined to draw bolder conclusions than would appear warranted to most European colleagues. The Italian, finally, not infrequently indulges in rhetorical flights, and clothes the hard facts of science in an airy imagery. These, of course, are general characteristics, everywhere are exceptions, and the best authors of all nations have usually adopted the good qualities of other countries without losing those of their own.

A work, nowadays, to be of scientific value must give proof of the extensive study of the literature on the subject. The larger American works, on the whole, take the first place in the matter of a really international use of literature. German works come next, but too often the contributions of the Fatherland have alone been consulted, while those of other countries have been left out of account. In France and Italy the study of the foreign laryngological literature appears to be on the increase. The British laryngologists do not regard with special favour historico-literary reviews; they look for conciseness, and a writer who quotes the opinions of many others will readily arouse the suspicion that he is padding his work. When various views are referred to, as a rule they are those of other English or American investigators; linguistic difficulties may have much to do with this.

The author indicates the advantages of an intelligent use of literature. He deprecates the indiscriminate quoting, merely for the sake of completeness, of every view advanced on the subject under discussion.

In making references, the custom formerly was to place them as foot-notes, the page being stated. The mode nowadays is to compile as long a bibliography as possible, arrange it alphabetically or chronologically, and place it before or after the text. The author looks upon the old method as vastly more convenient for writer and reader, and considers that the new fashion has nothing to recommend it.

In referring to quarrels of priority the author quotes a passage from Schopenhauer which places the matter on a clear basis.

This interesting paper closes with some remarks on the relations of author to critic; on the growth of laryngo-rhinological societies, and the consequent danger of the isolation of the speciality; and on the zeal and success with which the allied branches of science have been made serviceable to laryngology.

A. B. Kelly.

**Stankowski, R.**—*Two Cases of Acute Œdema of Larynx caused by Iodide of Potassium.* "Münchener Med. Woch.," Mar. 23, 1897.

VERY few cases of primary acute œdema of the larynx due to iodism have been published. In 1890 Avellis gave a list of only fifteen cases, one of which was

doubtful; and published two of his own. Two other cases were published by Schmiegelow in 1893.

Of the two cases now published by Stankowski, the first occurred in a man twenty-nine years old suffering from phthisis pulmonum et laryngis. When first seen, November 11th, 1896, the true and false cords were reddened and moderately infiltrated; in the plica interarytænoidea was an irregular infiltration, most marked on the right side; the right arytenoid cartilage and aryepiglottic fold were swollen. Treatment: daily insufflation of iodol. November 14th, 1896, ordered by Prof. Erl to take 1 g. pot. iod. twice daily; on 18th this was increased to 1 g. thrice daily. November 19th, 1896, considerable œdematous swelling of the whole left arytenoid, specially marked posteriorly and laterally, and extending into the sinus pyriformis. Owing to some mistake the iodide was continued on 19th and 20th, the condition remaining unchanged. The iodide was then stopped; by the 22nd the œdema was slighter, and by the 26th had completely disappeared.

The second case occurred in a syphilitic man aged thirty-one, who when first seen had been taking considerable quantities of K. I. for a fortnight, viz. :—

|                     |       |
|---------------------|-------|
| Pot. iod. ....      | 5'0   |
| Aq. lauroc. ....    | 1'0   |
| Aq. dest. com. .... | 100'0 |

Two tablespoonfuls at nine and at ten o'clock every morning. He had also been using an iodine ointment at the same time.

Slight respiratory distress gradually came on. On December 31st, 1896, there was found in the larynx diffuse moderate redness. In the region of the right arytenoid, especially on its posterior and lateral aspects, and extending thence into the sinus pyriformis, the mucous membrane was swollen, opaque, translucent, and of a pale red colour. The iodide was stopped. On January 2nd, 1897, the œdema was decidedly less, and by January 1st, 1897, had quite disappeared.

In both cases the œdema was unilateral and circumscribed; in both cases the iodide had been taken for some days before the œdema commenced. In neither case were the symptoms acute or alarming.

*Arthur J. Hutchison.*

## E A R.

**Alderton, H. A.**—*Toxic Paralysis of the Chorda Tympani Nerve in Middle-Ear Operations from the Use of a Strong Cocaine Solution.* "Ann. Otol.," etc., Feb., 1897.

THE patient was deaf with evidence of good nerve conduction, but with a depressed adherent cicatrix over the inco-stapedial joint. The cicatrix was divided, also the stapedius tendon, and the joint disarticulated. The chorda never came into view, and yet a complete temporary paralysis occurred which lasted about twenty-four hours.

*R. Lake.*

**Barr, Thos.**—*A Case of Chronic Purulent Inflammation of Both Middle Ears, proving Fatal by Extension on the Left Side through the Labyrinth and Auditory and Facial Nerves to the Interior of the Cranium.* "Glasgow Med. Journ.," April, 1897.

THE patient, first seen in 1894, was a lad aged seventeen, with bilateral foetid otorrhœa of seven years' duration. His father and one sister had both had unilateral otorrhœa for many years, and the sister had died of "inflammation of the brain." When first seen there was perforation of the membrane of Shrapnell on both sides, through which came profuse purulent foetid discharge. After treatment

with attic syringe, etc., had been carried out for some time, operation was proposed, but refused. The boy then went home, and returned two years later. At that time the discharge still continued; the left ear, which was plugged by a large polypus, was totally deaf; the right heard a watch at  $\frac{1}{70}$ . There was also occasional buzzing and slight giddiness. The polypus was removed, and a carious condition of the posterior wall of the meatus discovered. A few days later the attic and antrum were opened into; cario-necrotic *débris*, granulations, and cholesteatoma cleared out. The pain and other symptoms then disappeared, and in a few weeks patient was up and out. Slight headache, both frontal and occipital, now came on, with temperature of 100, then suddenly sickness, vomiting, delirious excitement, and a temperature of 102. Dr. Jas. H. Nicoll was then called in. He exposed the greater part of the sigmoid sinus and the dura mater lining the floor of the middle fossa, but in neither position did he find pus or any other sign of disease. Further operation was postponed; the boy began to improve, and the temperature became normal. About a week later there suddenly came on delirium, unconsciousness, extremely rapid pulse, temperature  $104^{\circ}$ - $106^{\circ}$  F., and, after about eight hours, death.

*P.M.—I. Temporal Bone.*—The most interesting features were: (1) A large cavity, lined by a soft membrane, in the petrous portion and continuous with the antrum. This was the result of necrotic destruction of the whole labyrinth. The only trace of labyrinth left was a small loose sequestrum consisting of a portion of the cochlea. (2) In the roof of this cavity was a carious opening into the middle cranial fossa, covered by healthy dura mater. (3) The cribriform lamina had been eroded away, the auditory nerve presenting here an abrupt and ragged ending. (4) The stem of the nerve was swollen and thickened. (5) The facial shared in this thickening in the internal meatus, lay directly under the dura at the geniculate ganglion, and was destroyed at the posterior part of the inner wall of the tympanum.

*II. Interior of Cranium.*—Fibrinous exudation was found in the pia-arachnoid over the convexity, at the base, specially marked on left side of pons and medulla, and slightly on posterior aspect of cerebellum. That part of the cerebellum which lies on the pars petrosa was superficially ulcerated, and foetid pus penetrated deeply into the cerebellar tissue. There was a considerable quantity of clear fluid in the lateral and fourth ventricles. The dura, even where it covered the carious aperture above referred to, seemed healthy.

Arthur J. Hutchison.

**Crockett, E. A.** (Boston).—*An Acute Syphilitic Affection of the Ear.* "Boston Med. and Surg. Journ.," Feb. 11, 1897.

In this paper the author points out that syphilitic affections of the ear are far more common than is generally supposed, and that they present a marked similarity in their symptoms—namely, very sudden and severe deafness, more or less severe vertigo, and violent tinnitus. He also draws attention to the fact that, whilst the watch and voice deafness is very marked, and a tuning-fork of the middle register is wholly lost to bone conduction, it remained fair for air conduction; and whilst the upper register, as shown by the Galton whistle, was more or less diminished, the lower register remained unaltered. The author is of opinion that pilocarpin may be given with advantage in these cases combined with antisiphilitic treatment.

St George Reid.

**Friedewald, H.**—*On Osteomata of the Auditory Canal, with Report of Successful Removal of a Large Exostosis by Schwartz's Operation.* "Ann. Otol.," etc., Feb., 1897.

THE patient was a woman of sixty-six years, who had never had otorrhœa. There was a hard, whitish tumour occluding the auditory canal; its external surface

was about a quarter of an inch from the orifice. When seen a month later granulations had sprung up at its free border, and there was reason to suspect retention of pus. The auricle and cartilaginous tube were then reflected forward, and the osseous tumour found occluding the entrance of the bony canal. It was removed easily and the ear replaced. Hearing was restored in a marked degree, and there was no contraction of the canal. *R. Lake.*

**Laurens, G.**—*Relation between Aural and Ocular Diseases.* "Thèse de Paris," 1897.

IN an interesting dissertation Laurens reviews the anatomical and physiological relations between the ear and the eye, and studies the pathological consequences of these relations. The ocular disorders noted in the course of aural diseases are numerous—myosis, iritis, blephero-spasm, and paralysis. The more frequent are the nystagmus and optic neuritis. These disorders appear after various lesions of the ear, but specially in suppurative otitis, when it is complicated by mastoiditis, cerebral abscess, or thrombosis of sinus. They are the consequence of direct propagation of septic inflammation through the brain or meninges, or of reflex troubles, or secondary infection by vessels or lymphatics. The author indicates the great interest of these disorders for the diagnosis and indication of operative interference. A complete bibliography is appended. *A. Cartaz.*

**Leutert, E.**—*On the Value of Lumbar Puncture in the Diagnosis of Intracranial Complications of Otitis.* "Münchener Med. Woch.," Feb. 23 and March 2, 1897.

AFTER a short historical outline of the work done in connection with lumbar puncture since its introduction to the profession by Quincke in 1891, the author quotes eleven cases in which he has used it for diagnostic purposes in the ear clinic in Halle, and then discusses the value of the method.

In the first place he notes that, as was to be expected from the results obtained by previous workers, as a therapeutic agent lumbar puncture is valueless; further, that in advanced cases of brain tumour, or even meningitis, it may be dangerous. One patient died fifteen minutes after the puncture had been made. In this case, which was the author's first, the man was extremely ill, and aspiration was used.

Almost all previous writers considered the method valuable only when a positive result was obtained. Leutert, on the other hand, holds that a negative result is still more valuable.

If on making the puncture only a small quantity of cerebro-spinal fluid comes away, no conclusion at all can be drawn as to the intracranial condition, because all the fluid may have come from the spine, and there are quite a large number of causes that may have shut off the cerebral fluid. But if a larger quantity of fluid than could be of spinal origin comes away, it must be cerebral. If this contains products of inflammation, leucocytes (specially polynuclear leucocytes), broken-down leucocytes, or bacteria, diagnosis of purulent meningitis may at once be made; on the other hand, if the fluid is clear and contains none of these inflammatory products, purulent meningitis may be as certainly excluded.

From another prolonged research the author has been led to the conclusion that the only complications of otitis that produce continuous high fever are meningitis and sinus thrombosis, or permeability of the sinus wall for bacteria or their toxins; cerebral abscess may sometimes produce a similar condition, but not for long. Therefore, given a case of otitis with continued high fever, let lumbar puncture be performed; if the results are negative, sinus thrombosis may be diagnosed right off. Further, it seems very probable that in all cases of sinus thrombosis there is an increase in the quantity of cerebral fluid; this, however, is not certainly-established yet.

In the differential diagnosis between cerebral abscess and sinus thrombosis, lumbar puncture is of no direct assistance ; but where both are present it may indirectly assist by leading the surgeon to operate on the thrombosis at an early date, and so giving the abscess a chance of showing its own proper symptoms. In the diagnosis between abscess and tumour it is of no use at all.

With regard to the exclusion of meningitis a very important point is that the clear condition of the fluid, which excludes a purulent meningitis, does not exclude a tubercular meningitis ; sometimes, but not always, tubercle bacilli can be found in the latter. This is not regarded by the author as seriously impairing the value of the procedure, as the two classes of cases are not at all likely to be confused clinically.

Bacteriological examination of the fluid has so far proved very unsatisfactory. Bacteria were sometimes found, could seldom be cultivated, and never produced any reaction when injected into animals. The probable causes of this peculiarity are discussed.

Arthur J. Hutchison.

**Somers, Lewis** (Philadelphia). — *Traumatic Perforation of the Membrana Tympani*. "Philadelphia Polyclinic," March 6, 1897.

REPORT of a case where the membrane was perforated intentionally by the patient in order to relieve his deafness, a splinter of bone being used for the purpose. Owing to the force used, however, the chain of ossicles were jammed together, leading to impaction of the stapes, and giving rise to intense pain and total deafness, there being also considerable congestion of Shrapnell's membrane set up. On examination the perforation was seen to be situated in the posterior inferior quadrant. By the use of Siegel's speculum the ossicular chain was relieved from the increased pressure, with the result of the disappearance of the pain and increase in the hearing distance. The perforation rapidly closed with a firm cicatrix.

St George Reid.

## REVIEWS.

**Dalby.**—*Short Contributions to Aural Surgery*. By SIR W. B. DALBY, F.R.C.S., M.B. (Cantab.). (London : J. & A. Churchill. 1896.)

IN the present edition—the third—of Sir W. Dalby's well-known "Short Contributions to Aural Surgery," five additional papers have been added dealing with (1) the functions of the membrana tympani, illustrated by disease ; (2) bubble remedies in aural surgery ; (3) cancer of the ear ; (4) hysterical (so-called) and functional deafness ; (5) a note upon adenoid growths.

The author's object in his paper upon the functions of the membrana tympani, illustrated by disease, is to prove (1) that structural changes in the tympanic membrane of a very extensive nature may exist without impaired hearing, and (2) that loss of continuity in the tympanic membrane does not necessarily interfere with its function, provided that the ligamentous support which it affords to the chain of ossicles is not impaired. These two propositions are, of course, well known to, and admitted by, aural surgeons ; but to many the fact that a perforation of the membrane may exist and be compatible with perfect, or almost

perfect, hearing is as yet not so fully appreciated as it should be. It cannot be too strongly insisted upon and taught that loss of hearing power may be due to causes other than those which include a loss of a portion of the membrana tympani.

In the article upon bubble remedies in aural surgery, the author makes some strong and, we think, perfectly justifiable remarks upon the indiscriminate use of pilocarpin in the treatment of diseases of the ear. That this drug, useful as it undoubtedly is in a few cases of ear disease, should have been used with such frequency, and in so many and so diverse pathological conditions of the ear, is, to say the least, to be sincerely regretted by all who have the welfare of aural surgery truly at heart. For does not such an indiscriminate and unscientific employment of any remedy, be the remedy what it may, throw discredit upon the profession at large?

The author also makes some scathing remarks upon the removal of the turbinated bodies for the relief of deafness and tinnitus—remarks which, although they may not receive unqualified acceptance, are well worthy of perusal.

Paper No. XVIII. deals with the important and interesting subject of hysterical (so-called) and functional deafness. Several histories of cases seen by the author are given, and remarks made upon the management and treatment of these interesting conditions.

For the removal of naso-pharyngeal adenoid vegetations in patients over eight or nine years of age, the author thinks that the steel nail should always be used. Many will, no doubt, disagree with this method of practice, and will elect other instruments for the purpose. Whatever instrument, however, be employed the object is the same—to effect as perfect a clearance of all diseased tissue as is possible. In exceptional cases, again (whatever instrument be employed), a second operation may become necessary, and it is well that this occasional necessity be fully explained to parents, in order, as the author remarks, “to dispel any idea of an imperfectly performed operation.”

These various papers, written in the author's well-known style—clear, concise, and to the point—will be found well worthy of perusal.

*W. Milligan.*

**Bonnier.**—*L'Oreille: I. Anatomie; II. Physiologie—Physiogenie et Mécanisme; III. Physiologie—les Fonctions.* (“The Ear: I. Anatomy; II. Physiology—Physiogeny and Mechanism; III. Physiology—the Functions.”) By P. BONNIER. (Paris: Masson et Cie.)

THESE are three out of five volumes on the subject of the ear, contributed by Dr. P. Bonnier, as part of a scientific encyclopædia prepared under the direction of M. Léauté. Those who have read the author's contributions to the meetings of the Paris Laryngological and Otological Society, as reproduced from time to time in the JOURNAL OF LARYNGOLOGY, will be prepared to welcome these volumes as from the hand of an enthusiast, well worthy of the attention of anyone who desires to find in the specialty of otology some food for thought over and above the daily round and common task.

The first, or anatomical, volume is devoted to a description of the human ear, its development, the anatomy of the temporal bone, the auricle, meatus, middle and internal ear, the central course of the cochlear and vestibular fibres, and the cerebral cortical centres with which they are connected. There are large numbers of excellent illustrations, including the blood vessels and lymphatics of the auricle, but not the nerves. There is an interesting chapter on the various hila; among other points the membrane of Corti as a cupola formation built on the auditory hair cells, is clearly, if somewhat schematically, brought out. There is an excellent diagram of the connections of the cochlear and vestibular nerves with the cerebral nuclei and cortex, the vestibular one being traced to the Rolandic convolutions, where the writer maps out a cortical centre for equilibration. [This accords well with some comparatively recent experimental observations of Ewald's.—REV.]

In the second volume the physiogeny or evolution of the auditory organ throughout the whole animal kingdom is treated in such a way as to show that it has been a labour of love to the writer. The most interesting stages are, perhaps, those found in the fishes in relation to the lateral line and the swim-bladder, the latter functioning, of course, in response to indications of depth in the water given by the equilibril portions of the internal ear. The enormous size of the otolith in the saccule of many fishes is very striking. The writer analyzes the different forms of tactile stimulus which the equilibril organ is capable of receiving, as (1) sensation of simple contact, *touch*; (2) sensation of periodic pressure, *seismæsthesia*; (3) sensation of pressure of surrounding and superincumbent liquid, *baræsthesia*; (4) the same kind of pressure, but periodic, *seisæsthesia*. Dr. Bonnier combats the Helmholtz theory of the function of the cochlea, refusing to consider it in any other light than that of a "registering" mechanism, analogous to Marey's tambour and style, which analyzes without decomposing the compound wave. He does not seem to us to disprove the possibility of the individual fibres of the basilar ligament vibrating in consonance with their proper tones and reinforcing their effect. One very interesting chapter deals with the various reflexes which take place in the organs of hearing—intrinsic reflexes of compensation, of accommodation, of interception; extrinsic reflexes through the great auricular, the pneumogastric, the auriculo-temporal, the glosso-pharyngeal, the chorda tympani, the vestibular, the oculo-motor, the citricular, the saccular, and the cochlear nerves.

The work as a whole is pervaded by a tone of originality in conception as well as in the interpretation of facts already recognized. The details are accurate and clearly expressed, while the illustrations are numerous and instructive.

Dundas Grant.

*The American Year Book of Treatment.* (Gould.) (Rebman Publishing Co., 11, Adam Street, Adelphi, W.C.)

IN this the second year of its existence, "Gould's Year Book" gives good evidence of its sound basis, the present volume being in every respect quite equal to—if it does not even exceed—last year's production. The editors still continue to follow the same excellent method and system

which makes the book most readable and keeps the matter in an interesting form, with an easy and ready method of reference.

It is a volume which will be a necessity to every library, and to every practitioner who wishes to be able to lay his finger on any particular class of case and discover the latest treatment, coupled with an intelligent and unbiased criticism.

The size of the book is practically as before, and we hope the editors will see their way not to further increase its size.

The original plates and reproductions, both chromos and others, are of a very high class, and show what a large demand this book must have attained; and we prophesy a still further success.

Dr. Ohls has replaced Dr. Hardie on the section of "Nose and Larynx," and proves an equally able editor.

**Kirstein.**—*Autoscopy of the Larynx and Trachea.* (Direct Examination without Mirror.) By ALFRED KIRSTEIN, M.D. Berlin. Authorized Translation (altered, enlarged, and revised by the Author). By MAX THORNER, A.M., M.D., Cincinnati, O., Professor of Clinical Laryngology and Otology, Cincinnati College of Medicine and Surgery, Laryngologist and Aurist, Cincinnati Hospital, etc. With twelve illustrations. (Philadelphia: The F. A. Davis Co. 1897.)

IN a charmingly got-up little volume of sixty-eight pages Dr. Max Thorner has presented a translation of Dr. Kirstein's original and latest writings on autoscopy. The process of seeing the larynx directly is an ideal one, but, as the author frankly admits, is only realizable in a limited number of cases. Autoscopy requires patient practice before success is attained, and it is therefore more likely to be adopted by the younger than by the older laryngologists. The results obtained are not likely to reward the observer in a very large proportion of cases, but we cannot afford to neglect a means of seeing the larynx from a somewhat different point of view from that afforded by the laryngoscope. In any case it teaches how much may, with practice, be done by means of the forehead mirror and tongue depressor. The author recommends the method for the examination of children, also in some cases of carcinoma of the larynx, and for a certain number of operations (foreign bodies, tumours, etc.). The book is a most instructive one, and ought to be studied by all who treat the throat, whether or not they adopt the special instrument described.

*Dundas Grant.*

**Blumenfeld.**—*Specielle Diätetik und Hygiene des Lungen- und Kehlkopf-Schwindsüchtigen.* By Dr. FELIX BLUMENFELD, Wiesbaden. (Berlin: A. Hirschwald. 1897.) 108 pages.

IN this little book the author presents us with a careful, condensed, and practical study of the diet and mode of life to be adopted in different cases of consumption. Shortly stated, the object in such cases is by general measures to bring all the organs of the body into their healthiest possible condition, and whilst aiming at this to specially guard the diseased parts from any too sudden or excessive activity. The whole question affects not only the diet and various special methods of treat-

ment, but the patient's most ordinary habits and his means of employment and amusement. The field of study is therefore immense, and the author must be congratulated on his happy conciseness in explaining and discussing the different portions of it.

The first part of the book is devoted to the subject of diet, and in this the author is fortunate to have had as his teacher Prof. C. von Noorden, so well known for his investigations and writings on the metabolism in various diseased conditions of the body. If we remember that treatment by diet is not specific, it becomes evident that each individual patient must be separately studied; our aim is to obtain the best possible condition of nutrition, and the way to do this varies as much in different cases of consumption as it does in healthy persons.

The next part of the work deals with the "pure air" treatment, and with the exercise, amusement, clothing, and hygiene of the skin to be adopted. Even the new popular amusement of burning decorative patterns on wood and leather with a Paquelin's cautery is mentioned, and on account of the irritation of the air passages from benzine vapour is not considered to be a suitable pastime for phthisical patients.

In the third section the various special symptoms and complications of pulmonary tuberculosis are considered, such as troublesome cough, fever, hæmoptysis, dyspepsia, etc. The question which so often arises as to the danger of marriage in the case of consumptives is likewise shortly discussed, and too much interference on the part of the doctor is deprecated. In regard to occupations for consumptives and persons with a tuberculous tendency, those involving the inhalation of dust or injurious gases, and those necessitating confinement in close rooms, are specially to be avoided; so also employment involving irregular hours and habits (as in waiters), or over use of the respiratory organs (as in the use of wind instruments), or the risk of chronic metallic poisoning (as in house painters).

The author thinks that every consumptive, if there be no special reason (such as extreme weakness) to the contrary, should have his throat and nose examined. In cases where breathing through the nose is hindered by polypus, deviated septum, or hypertrophied turbinates, operative treatment must be considered when the general condition permits; mouth breathing stands in the way of a proper open air cure. When for any cause satisfactory breathing through the nose cannot be obtained, a mild climate should be selected for the winter. In *laryngeal tuberculosis* the author considers that silence—practically absolute—should be observed. Much wind and sudden changes of temperature must be avoided. Foggy weather is generally harmful, but a moist, mild climate on the sea-coast is beneficial, and a very dry atmosphere is harmful to those who have also pharyngitis sicca. Special care is required during cold weather. Whilst the laryngeal tuberculosis is still active, he considers that local treatment, even in the North of Europe, is to be preferred to a voyage in southern seas without special treatment. Into the management of pain and dysphagia in laryngeal tuberculosis the author enters at some length. Amongst other methods he considers the position described by Wolfenden as likely to make swallowing easier.

**Moire.**—*Diseases of the Naso-Pharynx and Pharynx.* (XXth Century Practice.) (New York: W. Wood & Co.)

INASMUCH as the author has for the most part avoided controversial matter, it is needless to detail any special portion of this work. It is essentially a text-book, dealing in a concise and very lucid manner with all that is essential for the practical purposes of the general physician and surgeon. Though the questions of etiology and pathology are by no means overlooked, the book will prove most valuable where it deals with symptoms and diagnosis. The sections devoted to treatment are unhampered by the introduction of a multiplicity of alternative proceedings, but describe very clearly the methods recommended by the author's personal experience. For this reason the work should prove the more acceptable to the general surgeon as a practical guide, and a valuable addition to the series of which it forms part. *Waggett.*

**Barr.**—*Manual of Diseases of the Ear, including those of the Nose and Throat in Relation to the Ear, for the Use of Students and Practitioners of Medicine.* By THOMAS BARR, M.D., Lecturer on Diseases of the Ear, Glasgow University; Senior Surgeon to Glasgow Hospital for Diseases of the Ear; Dispensary Surgeon for Diseases of the Ear, Glasgow Western Infirmary; Aurist to Glasgow Hospital for Sick Children. Second Edition. Entirely revised and extensively re-written. With Two Hundred and Twenty-nine Illustrations. (Glasgow: Maclehose and Sons. 1896.)

IT is said that one cannot build a house properly until one does it for the second time. Whether Dr. Barr's first edition of his book was incomplete or not, there is no doubt that the edition now before us is a work of first-rate merit. He has obviously expended much of the time since the publication of the former in keeping his teaching thoroughly on the level with the advance of otology, and it would be difficult to find so good a presentation of the subject in any work of the same or even of any size.

The work commences with a description of the methods of examining the ear, physical and functional, followed by a consideration of the various symptoms as such, and of the causes and of the methods of treatment of disease of the ear. The following two-thirds of the book contain the special accounts of the different diseases, beginning with those of the nose and throat related to the ear, then of the diseases of the auricle and external meatus, the tympanic membrane, the middle ear and the internal ear, followed by a chapter on deaf-mutism, an appendix on otalgia and the venous and vascular supply of the ear, a formulary of remedies, general index, index of authors, and a judiciously selected bibliography. The anatomical and physiological sections are wisely incorporated in the chapters devoted to the diseases of the region concerned, instead of taking the form of a lengthy and somewhat repellant set of preliminary chapters as in some other text-books.

Dr. Barr's instructions for examining the organ of hearing are extremely full, and, perhaps, as interesting as such a dry subject can be made. In the less practical (though, in our opinion, valuable) tests by means of Galton's whistle and tuning-forks of different pitch (p. 29), the account seems singularly meagre. Why to the tuning-forks C, C<sup>1</sup>, C<sup>2</sup>, C<sup>3</sup>, and C<sup>4</sup>, there should be added D<sup>4</sup>, simply one tone higher than the previous one,

is not very clear. Weber's and Rinne's tests are clearly given, but the paragraph on the "Disturbing Influences in Weber's and Rinne's Tests" is, in places, unconvincing. We quite agree (p. 41) that "predominance of the bone-conduction does not necessarily exclude mischief in the nerve structures," but we fail to understand how in a given case "predominance of the air-conduction does not therefore exclude disease of the conducting structures, but may simply mean that there exists in the nerve structures a condition which more than counterbalances the mischief in the conducting structures." It seems very obvious that a derangement of the nerve cannot alter the relation between air- and bone-conduction, although it lowers both together. Again, predominance of air-conduction certainly *does* exclude any considerable degree of disease of the conducting structures. It cannot be too clearly understood that Rinne's test reveals any disturbance of the relation between air- and bone-conduction produced by disease of the conducting apparatus, and nothing more. No mention is made of the absolute unreliability of Rinne's test, when negative, in purely unilateral deafness of any high degree. The manipulations and operations are admirably detailed, and we may mention the unusually good description of the use of the attic syringe (p. 69), to which might well have been added an account of Dr. Milligan's instrument; also the operation of incision of the tympanic membrane (dubbed, for some inexplicable reason, "myringodectomy") (p. 74), for which the indications, as in the case of all the other operations, are most clearly and practically laid down. The use of electricity is described with a degree of caution indicating very limited conviction as to its value, the methods of graduating and measuring the dosage in milliamperes and time being left, perhaps intentionally, for the reader to study in works on medical electricity. The use of the burr in mastoid operations is most judiciously advocated (p. 94), without undue disparagement of the chisel and mallet. No mention is made of Stacke's "protector" for the facial nerve, an instrument which many operators find of considerable value. The figures illustrating the anatomy of the parts are very good, but might advisably be supplemented by one showing in transverse vertical section the relations of the outer wall of the "attic." As a rule, Dr. Barr has come to practise early resort to irrigation and moist dressings in the after-treatment of mastoid operations for chronic disease. His recommendation of the instillation of alcoholic solution of carbolic or boracic acid after syringing is a valuable one, as is also the application of chromic acid to exuberant granulations. Ossiculectomy is described as practised by Sexton (p. 101). He very properly deprecates "anything like its general adoption" in non-purulent cases (p. 103). No mention is made of Delstanche's simple and ingenious extractor for the malleus.

A good account is given of the diseases of the nose and throat in connection with affections of the ear. He deprecates the removal of septal spurs or ridges on account of middle-ear disease in the absence of nasal symptoms, such as marked nasal obstruction seriously embarrassing breathing through the nose, persistent rhinitis, or severe paroxysmal sneezing unaffected by other forms of treatment—a very reasonable and

judicious principle of action. Bendelack Hewetson's "glove-stretcher" and Carmalt Jones's effective instrument for turbinectomy are described without comment (p. 137).

In regard to the removal of adenoids, Semon's reasons against delay in operating—the injurious influence on general health, mental development, and the formation of the face, the danger of ear complications, and the greater liability to, and seriousness of, infectious diseases, especially diphtheria and scarlet fever—are quoted with approval.

Dr. Barr expresses his preference for chloroform as an anæsthetic, having used both ether and nitrous oxide (p. 139). His reasons are not very convincing, as he seems fully to recognize the dangers attaching to the anæsthetic, and quotes Dr. Silk's disapproval of giving chloroform, or any other anæsthetic, after anæsthesia has been induced and the operation begun. The advantages of chloroform are the general familiarity with its administration on the part of practitioners who may be unable to administer nitrous oxide, its greater acceptability to little children, and the prolonged anæsthesia desirable in case of inexperienced operators. For specialists habituated to manipulate and operate with reflected light on patients in the sitting posture, nitrous oxide, administered by a skilled person, is ideal as regards safety and sufficient in almost every case. All the various instruments are described, including Golding-Bird's curette, with the comment that it "seems to be a serviceable instrument" (p. 145). The reviewer has found it an invaluable one. The writer's preference is for Gottstein's curette, supplementing it with the forceps for large, tough portions, and the curette and finger-nail for the softer variety and those growing from the lateral walls of the pharynx (p. 139).

We then come to the accounts of the special diseases. Those of the external meatus are described with great accuracy, but the absence of a description of *keratosis obturans*, as such, is rather surprising where otherwise such completeness prevails. The reference to the diagnosis of ceruminous accumulations from "collections of dried purulent masses, "coloured with blood or cerumen, or masses of fungi or cholesterine," may be taken to indicate the condition; but with us in London it forces itself upon our attention by the pain produced when what Dr. Barr describes as "the preliminary treatment of these conditions, namely, "syrringing the ear with hot water," has been carried out. The swelling up of the epithelial masses under the action of water, with consequent violent pain, is one of the most conspicuous characteristics, the relief afforded by the dehydrating action of drops of glycerine and alcohol being almost equally conspicuous. The accounts of the inflammatory affections of the external meatus require no addition. Dr. Barr's views with regard to operations for removal of exostoses would indicate, we think correctly, that the occasion for them is extremely rare, and that in by far the majority of cases the patient's interests are best served by skilful cleansing, gentle dilatation, and the employment of astringents and other remedies.

Primary acute and chronic inflammations of the membrana tympani are considered so rare as not to deserve separate notice. This is, perhaps, carrying rather too far a view which will receive extensive support.

Cases certainly occur from time to time presenting marked objective and subjective signs of inflammation of the membrane in which the rest of the meatus is practically normal, and the hearing power is in proportion so good that any considerable disease of the middle ear is eliminated. Politzer has illustrated and described many of these.

In dealing with diseases of the middle ear, Dr. Barr takes the somewhat unusual course of describing the purulent forms of inflammation before the simple catarrhal ones. No doubt he is led to do this from a just appreciation of the degrees of importance attaching to the knowledge of this form of inflammation, whether acute or chronic, and its results. The various points on which the practitioner desires specific information are well brought out. The tendency of the antrum to escape, and of the cortical cells to be affected, in acute inflammation extending to the mastoid process, is very well emphasized on page 270 and elsewhere. The chronic processes receive full justice in an excellent chapter, and the morbid anatomy is illustrated by some excellent engravings. In describing the situation of caries and necrosis, the floor of the tympanum, which is exactly over the bulb of the jugular vein, might have been mentioned, although reference is made to it in the description of thrombosis of the jugular. The mode of formation of cholesteatomatous masses (p. 276) may be the true one, but it is not quite in accordance with the most recent teaching on the subject. The treatment, however, is very well described.

The nerve supply of the walls of the soft palate is at present under discussion, but the description of the occurrence of paralysis of the palate as the result of disease of the facial nerve is probably inserted in deference to tradition, on which a good deal of doubt has recently been cast. The publication of descriptions of cases illustrating the points described would be received with the greatest interest.

The history of septic thrombosis of the sigmoid sinus is particularly well written, and that of the operative treatment is most interesting. The methods adopted by Macewan, of Glasgow, and by the other many well-known operators, are judiciously described and compared. There is no reference to pyæmia resulting from suppurative disease of the ear without sinus phlebitis; and in view of the instructive facts published by Koerner (who, by-the-bye, is one of the very few important names omitted in the bibliography) and by Hessler, this is a subject with which Dr. Barr would be well advised to deal in the next edition of his work.

The non-purulent affections of the middle ear are treated in thirty-three pages, which seems a very small amount of space for the matter; but it is to be remembered that the minute instructions given for the application of the various modes of treatment in an earlier chapter will go a long way to explain this.

The classification of the inflammatory processes in the middle ear into mutually excluding groups is probably an impossibility, and authors vary in the mode of their attempts to effect it. Dr. Barr, after the purulent inflammation, puts the exudative and the non-exudative or interstitial inflammation of the middle ear, looking on the exudative

apparently as an acute affection, and the non-exudative as a chronic one. At the same time he divides the non-exudative into two sub-classes: the catarrhal (known to some as the chronic exudative) and the sclerotic (known, and too well known, to all as such). In view of the fact that this last form develops in typical cases without any antecedent catarrh, we would advocate relegating its discussion to a chapter by itself, as it is only by this means that the learner can be impressed with its essentially specific nature, and thereby deterred from pushing in ignorance a useless and discreditable form of local treatment. At the same time Dr. Barr's directions (pp. 343, 344), if carefully studied and faithfully followed, should prevent any serious lapse in this direction.

The diseases of the labyrinth and auditory nerves seem to be dismissed with comparative brevity. Truth to tell, however, Dr. Barr has apparently arrived at this by eliminating the large hypothetical elements and detailing the somewhat limited practical ones. In doing so he has omitted very little of value.

Dr. Barr has given us a sound, practical work, which is destined at once to take a leading position, which it will maintain. We doubt not that there will be an early call for another edition, which, with such few alterations or additions as have been above suggested, will be very difficult to equal.

*Dundas Grant.*

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#### LITERARY NOTE.

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THE REBMAN PUBLISHING COMPANY announce, as in the press and to be issued forthwith, a new work on Heart Disease, entitled "Cardiac Failure and its Treatment, with especial reference to the use of Baths and Exercises," by Dr. Alexander Morison, Physician to the Great Northern Central Hospital, London.

The book will include an appendix by Medizinalrath Dr. Groedel of Bad-Nauheim.

# JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

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## INFLUENCE OF ADENOID VEGETATIONS ON THE GROWTH AND CONFIGURATION OF THE UPPER MAXILLA AND THE NASAL SEPTUM.<sup>1</sup>

By J. W. GLEITSMANN, M.D.,

Professor of Laryngology and Rhinology, New York Polyclinic; Laryngologist to the German Hospital and Dispensary; Chairman of the Section on Laryngology of the New York Academy of Medicine, etc.

THE subject which I submit to your consideration this evening has, in my opinion, not received the attention it deserves; and although I am not able to present new or original ideas and facts, I bring this matter before the Section for two reasons: a due appreciation of these conditions and their consequences will in many cases influence our action, which otherwise may be tardy, and may be postponed to the detriment of our patients; further, although the subject has been alluded to as early as 1876 by Continental writers (Michel), and 1885 by the late Jarvis of this city, the dissemination of the knowledge of this anomaly seems to me to take an unusually slow course. The text-books of our specialty, with very few exceptions, mention the matter either not at all or devote only a few lines to it. The most recent and elaborate handbook of Heymann contains in the article on deviations of the septum, by V. Lange, only the statement that a high-pitched palate may exert a deleterious influence on the nasal septum. In contrast to this assertion is a statement made by one of our members, Dr. Delavan, in the "Transactions" of the American Laryngological Association, 1887, viz., a diagnostic sign of an habitual mouth breather is a high-arched, narrow, hard palate, associated with deflection of the nasal septum.

In order to understand more fully the changes brought about by

<sup>1</sup> Read at the meeting of the Section on Laryngology of the New York Academy of Medicine, April 28, 1897.

adenoid vegetations, it is advisable to analyze briefly a few other conditions which have been held responsible for producing abnormal growth of the palate and the superior maxilla. Jarvis, with his intuitive mind, very correctly recognized and associated a high-pitched and narrow palate with a deviated septum. Observing this condition in several members of families which came under his notice, he inferred that it was a hereditary manifestation. Although the congenital influence on certain types of noses, or on the formation of the face, cannot be denied, it certainly plays a minor part in the present subject; and, knowing how frequently obstruction of the post-nasal passages is found in children of one family, this factor cannot be left out of consideration. The higher degrees of abnormal growth also develop, as a rule, several years after birth. The same author, very properly, refutes the influence of scrofula and rachitis in this connection, which latter affection has even in a recent publication been held accountable for malformations of the upper maxilla. The lesions due to rachitis occur generally in early infancy, and manifest themselves more in the lower than in the upper maxilla. Finally, an affection which produces similar symptoms is occlusion of the choanæ; but also here we observe a difference in the shape of the maxilla, which will be pointed out later on.

The first time my attention was drawn to a high arch of the palate in conjunction with malposition of the teeth, was in a child seven years of age, from whom adenoid vegetations had been removed by another physician with the curette two years before. The child had well-to-do parents, who were very solicitous of its welfare, and observed all symptoms most carefully. The previous operation improved the child at the time, restoring nasal respiration; but the benefit gained was soon lost, and about a year before I saw it the old trouble reappeared and grew worse, till the child was in the same condition as before the first operation. The removal of the growths was this time done under narcosis with the post-nasal forceps, was most thorough, and did not present any unusual features. But I saw at once, and also the parents had noticed it before, that the hard palate was elevated to the highest degree; further, that the upper jaw presented the form of a V-shaped maxilla, formed an angle in front instead of the usual curvature, and that the teeth were crowded so much out of position that, there being not enough space for them, two incisors were standing back instead of next to each other. At that time I was not cognizant of the investigations of Koerner, and thought in vain for an explanation of this anomaly in so young a child. These exquisite malformations I have seen only in a small number of children, whilst I found a high-pitched palate with deviated septum more frequently. It seems that such a condition of the maxilla and teeth is not as rare on the Continent as with us—possibly because we may not have bestowed as much attention to it heretofore—possibly because the people here are more inclined to bring their children with their so-called catarrh to one of our numerous dispensaries, in which the large number of rhinologists is ever ready to operate on adenoid vegetations. Their early removal may also account for the infrequency of the higher degree of malformations.

We will now analyze more fully the conditions dependent on the presence of adenoid vegetations. Koerner, and after him Waldow—whose statements I shall follow here chiefly—made very careful examinations on the dead and living subject, and the results of their investigations are as follows :—Koerner was the first to point out that two degrees of configurations of the maxilla have to be distinguished, dependent upon the presence of adenoid vegetations before or after the second dentition.

When nasal respiration is impeded in a growing child during a larger period by adenoid vegetations, the palate assumes a higher elevation in course of time, and appears in a section dome-shaped instead of a slight curvature. The alveolar process, which in the normal bone is a semi-circle, forms now an ellipse, and the lateral parts approach each other. Consequently the antero-posterior axis is elongated, the lateral one shortened, but nowhere can an angle or bend be observed anteriorly. The whole growth of the maxilla seems to be retarded, but the milk teeth are in their normal position. Such are the conditions which the authors named found to take place when adenoid vegetations are present before the second dentition, and in cases of occlusion of the choanæ. They assert it, and support their statement by observation on the living subject ; but both are unable to give satisfactory reasons why the following more aggravated form does not occur in occlusion of the choanæ, persisting after dentition. The assumption advanced that adenoids produce a change in the bony substance, especially of the upper maxilla, appears to me nothing better than a hypothesis. I myself can remember only one case of choanal occlusion in children, and this at a time before my attention was directed to this subject.

By far more pronounced and of greater importance are the changes the maxilla undergoes after the second dentition, when the adenoids have not been removed previously. The alveolar processes approach each other still further, the palate becomes still more elevated, and in some cases, instead of being dome-shaped, appears like a pointed arch. The anterior part of the alveolar process relinquishes its vertical position, becomes inclined forward, an angle forms at the median junction, and the maxilla assumes the V-shaped form so well known to the dentists. This change in the shape of the upper maxilla has a far-reaching influence on the position of the teeth. The median incisors are turned in their axis, and the lingual surfaces stand opposite each other.

The position of the other teeth depends greatly on the shape of the maxillar bone. If the nasal obstruction has taken place shortly before the second dentition the maxilla retains its usual size, and all the teeth can find their natural position. But if the growth of the bone has been retarded, there is not enough space for the teeth, and they are crowded out of their normal place. The lateral incisors are pushed inwardly, also often the bicuspid, whilst the molars turn generally outwardly. As the lower maxilla had not undergone any changes meanwhile, it often happens that the outer edges of the upper bicuspid strike against the inner ones of the bicuspid of the inferior maxilla.

A further consequence of the elongation of the antero-posterior axis of the upper maxilla, and of the oblique position of the incisors, is in

some cases the impossibility of perfect approximation of the teeth of both maxillas anteriorly ; the upper incisors protrude beyond the lower ones, and the upper and lower front teeth fall short of meeting each other. The V-shaped form of the upper maxilla, and the anomalous position of the teeth resulting from it, has been familiar to the dentists for many years past, and ingenious devices have been brought forward and adopted to correct the deformity. As this feature does not pertain to our work I shall not enter into further details, but turn my attention to the influence these conditions have on the nasal septum.

The observation that a high-arched, narrow palate is associated with deflection of the nasal septum seems to be a condition so generally acknowledged now by scientists as to need no further argument. The septum is destined to serve as a prop, pushing apart the upper maxilla from the base of the skull, and when it is crowded upward by the hard palate until it can no longer resist the pressure brought to bear upon it, deflection results (Delavan). Now, it is a well-known fact that septal deviations are a rarity before the seventh year, and Koerner never saw one before the second dentition, while it was present in all his cases after this period. If the foregoing statements and the conclusions derived are accepted as correct, the assertion will not appear presumptuous that adenoid vegetations play an important rôle in the causation of septal deviations, and have to be considered an important etiological factor.

Before concluding it behoves me to answer the very natural inquiry for an explanation of the development of these morbid changes. Two reasons are advanced by the authors on this subject, both of which appear to me feasible and rational. When nasal respiration is impeded the growth of the nose is retarded, which we see also in other organs whose functions are permanently interfered with. The nasal cavities remain smaller, and the palate becomes elevated. This condition has also been previously observed in enlargement of the faucial tonsils, necessitating mouth breathing, before the discovery of Wilhelm Meyer ; but knowing the frequent concomitant occurrence of both affections, we may rightly consider the adenoid vegetations as the real etiological cause.

The second, and, in my opinion, the by far more important, factor is the lateral pressure which the cheeks exert against the maxilla when the mouth is kept open. Already before dentition this pressure produces in long-standing mouth breathers a narrowing and lengthening of the alveolar process. After the change of teeth its effect is still more pronounced. During this period the alveolar processes approach each other more closely, the maxilla becomes elongated in its longitudinal axis, suffers a bend at its anterior junction, in consequence of which the palate rises still higher, and the V shape of the maxilla makes its appearance. Whilst these changes occur in the upper maxilla, the lower one retains its natural form. When the mouth is closed the tongue fills the buccal cavity and lies close against the teeth, the alveolar process, and the palate. In this position it exerts a pressure against the lateral part of the maxilla, counteracting that of the cheeks. When the mouth is open the tongue lies in the lower maxilla, and no pressure is exerted against the upper maxilla. To explain the greater influence of the pressure of

the cheeks against the upper maxilla during dentition, Koerner assumes that the maxilla loses its firmness through the loss of the milk teeth, and becomes softer in consequence of the greater influx of blood during the growth of the permanent teeth. The rapid development of the major changes seems to be favoured by the weakening of the junction of the maxillar bone anteriorly, which accounts for the V-shaped configuration of the upper maxilla.

Although I may not have been able to prove all the facts stated to your satisfaction, I think at least I have shown the necessity of an early removal of adenoid vegetations, if we wish to avoid the unpleasant consequences described. The subject is, in my opinion, certainly important enough to engage your attention and to merit further investigation.

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## THE TREATMENT OF SUPPURATIVE DISEASES OF THE ACCESSORY SINUSES OF THE EAR BY OZONE GAS:

### The Description of the Apparatus for the Generation and Application of Oxone.<sup>1</sup>

By W. SCHEPPEGRELL, A.M., M.D. (New Orleans, La.),

Vice-President of the American Laryngological, Rhinological, and Otological Society, etc.

AT the January, 1896, meeting of the British Laryngological, Rhinological, and Otological Association, the President, Dr. Geo. Stoker, described a number of cases of diseases of the nose and ear which were treated by means of oxygen gas. He reported two cases of *ozæna*, and one case of chronic purulent otitis media, in which he appeared to have had good results from the local application of oxygen.

The cases reported had not been checked by any bacteriological examination, but Dr. StGeorge Reid, who had conducted a series of investigations with a view of ascertaining the influence of oxygen on micro-organisms, found that in cultures of *staphylococcus aureus* and *albus*, *staphylococcus pyogenes*, and *diplococcus pneumoniae* which had been kept in an atmosphere of oxygen, all the growths were apparent fourteen hours after inoculation, but it appeared that the specimens growing in the air were about four hours ahead of those growing in the oxygen, and this difference continued.

The treatment with oxygen every second hour during the day was recommended, although in some cases in which its use gave rise to headaches it could not be continued so long or applied so frequently.

Dr. Stoker, at the July meeting of the same Society, reported a case of empyema of the frontal sinus, which had apparently been benefited by

<sup>1</sup> Read at the Annual Meeting of the American Laryngological, Rhinological, and Otological Society at Washington, May 3, 1897.

the application of oxygen, and he also reported a case of aural polypus treated by this method. In the latter case the polypus shrivelled and came out, after syringing, on the sixth or seventh day, and the discharge was diminished.

In the discussion of these cases, Dr. Lennox Browne stated that the benefit of the treatment in the reported case of frontal sinusitis was open to doubt. He said that he had used oxygen with considerable advantage in a case of a patient suffering from ethmoidal disease.

From a consideration of these cases, the treatment of suppurative diseases by the application of oxygen appeared worthy of trial, and I proceeded to have it systematically carried out in a number of selected cases: two cases of chronic suppurative otitis media, one case of chronic atrophic rhinitis with fœtor, one case of empyema of the maxillary sinus, and a case of empyema of both the left frontal and maxillary sinuses. The applications were made with great care and systematically followed out.

After a careful study of the results obtained, I found these apparently in nowise different from those which might have been obtained by the antiseptic irrigations which necessarily formed a part of the treatment; and, after having given this method a trial, varying from three weeks to three months in these cases, I was finally compelled to abandon it.

In considering the *modus operandi* of this treatment and its effects on organic tissue, we should remember that oxygen is a normal constituent of the atmosphere, the other element being nitrogen, which is inert as far as the respiratory function is concerned, and also in its effects on the tissues. When pure oxygen is used, therefore, we have simply eliminated the nitrogen and have applied an increased amount of the remaining constituent of the atmosphere. Oxygen is the vitalizing element in respiration, and when inspired in larger proportions than what is normally found in the atmosphere it has a powerful stimulating effect. If pure oxygen is inhaled for a sufficient length of time, death is produced by over-oxidation and excessive stimulation. As regards its effect on organic tissues or secretions, it is inert.

When Dr. Stoker compares the effects of oxygen with those of peroxide of hydrogen, he refers to two products which are physically very dissimilar in character—oxygen and *nascent* oxygen. While oxygen is, as already stated, comparatively inert, the nascent oxygen, which is eliminated when peroxide of hydrogen is used, is one of our most active oxidizing agents, and which readily attacks organic products; hence its usefulness in suppurative processes. If peroxide of hydrogen be added to a collection of pus, the nascent oxygen will at once attack it and form new compounds, the septic character of the secretion being thus entirely destroyed. If oxygen is added in a similar manner, the effect, if any, is so slow that it cannot be observed by the ordinary methods.

Instead of using oxygen I therefore decided to try the treatment of suppurative processes by means of nascent oxygen, or some preparation which would produce oxygen in its nascent form. Peroxide of hydrogen used in sufficient quantities for this purpose is not only expensive, but very irritating, and also inconvenient on account of the liquid in which

it is held in solution. After a careful investigation of the merits of various preparations I determined to use ozone, and the satisfactory results which I have obtained from its application in the treatment of suppurative processes of the nose, accessory sinuses, and ear, have been very gratifying.

Ozone is an allotropic form of oxygen, and differs from it in that there are three atoms of oxygen in one molecule of ozone ( $O_3$ ). It is a colourless gas of a strong pungent odour somewhat resembling phosphorus. It has not been obtained free from oxygen, the highest degree of concentration which has been reached being 10 per cent. of ozone. Ozone thus diluted may be produced (1) by the decomposition of water with the battery, (2) by the slow oxidation of phosphorus in damp air, (3) by the action of sulphuric acid on barium dioxide, (4) by adding permanganate of potash to acidulated hydrogen dioxide, and (5) by the silent electric discharge through air or oxygen.

The most economical and practicable method of generating ozone for our purpose is by means of the ozonizer first described by Siemens. A sort of Leyden jar is prepared by coating the interior of a long glass tube with tinfoil, and passing over this tube a second wider tube, also coated with tinfoil, but on its outer surface. Between the two tubes a current of oxygen is passed, which becomes electrified by induction, the inner and outer coatings of tinfoil respectively being connected with the terminals of a strong induction coil. By this means it is possible to convert 10 to 15 per cent. of oxygen passed through the ozonizer into ozone.

Pure ozone is a powerful oxidizing agent; it possesses strong bleaching and disinfecting properties, and attacks cork, rubber, and other organic substances. The test for ozone may be obtained by means of a strip of paper moistened with a mixture of starch and a solution of potassium iodide. On exposing paper thus prepared to the action of ozone, the potassium iodide is decomposed, the potassium combining with the oxygen, while the iodine is liberated, and forms a deep blue compound with the starch. For ordinary purposes I simply moisten a piece of blotting paper with a solution of iodide of potash, and the exposure to the ozone liberates the iodine, which shows its characteristic brown colour. Ozone is a rapidly oxidizing agent, and in sufficient degree of concentration is very irritating to the mucous membrane of the respiratory passages.

In my first experiments with ozone for its therapeutic effects I generated the ozone directly from oxygen, and then diluted it sufficiently for local application to the affected regions. I found the ozone in this degree of concentration difficult to handle on account of its rapid oxidizing effect, especially as it quickly attacked rubber. I then concluded to prepare the ozone directly from the oxygen found in the atmosphere. This was not only more economical, but the ozone could be used directly, as it was prepared in the required degree of dilution.

In order to eliminate the nitrogen products developed by this process, I at first passed the ozone through a U tube containing a small quantity of caustic potash. In testing the results, however, I found that the

nitrogen products were so infinitesimal in character that they could be neglected. I therefore no longer use the U tube and alkali.

In applying ozone in the treatment of the nose, accessory sinuses, or the ear, the apparatus is arranged as follows (Fig. 1). The ozonizer is connected with the induction coil, for which the inductorium used in generating the X rays is especially adapted, although a smaller coil—as, for instance, one which will give a two-inch spark—is of sufficient strength for the ozonizer. The compressed-air reservoir, which forms a part of every specialist's office, is then connected with the inlet tube of the ozonizer in such a manner that the patient can control the cut-off which

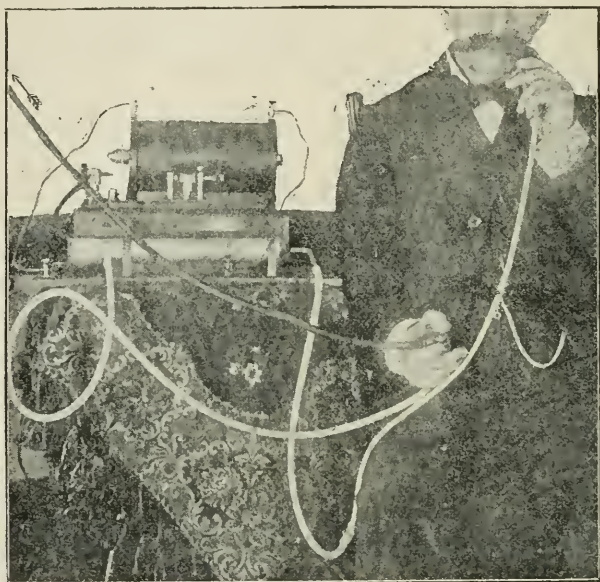


FIG. 1.

supplies air to the apparatus (Fig. 1). By means of a rubber tube, the special canula for applying the ozone to the nose, ear, or sinus is connected to the outlet tube.

The canulas which are used for applying the ozone to the various regions are shown in Fig. 2. A is the canula for the frontal sinus; C for the alveolar opening of the maxillary sinus; B for the normal opening of the maxillary sinus (*ductus maxillaris*), and D the nasal tip for ozæna. The canula C is also the most practicable instrument for applying ozone to the ear.

In some cases I have found it convenient to heat the ozonized air before applying it to the desired region, and this was easily effected by passing the ozonized air through a bent tube inserted into a bowl of hot water. The ozone should be heated only to the normal temperature of

the body, as a higher temperature causes a breaking-up of the atomic arrangement of the ozone.

Great care should be taken in properly adjusting the valve of the condenser, so that only a mild current of air is passed into the ozonizer. If too strong a pressure is used, an excess of air is admitted and the ozone is diluted too much. Where the object is to diminish the proportion of ozone, I have found it more practicable to do this by regulating the induction coil than by increasing the amount of air.

As already stated, nascent oxygen may also be obtained by adding permanganate of potash to an acidulated solution of peroxide of hydrogen. For this purpose I use an inhaler, which I described some years ago for inhaling medicated vapours. Three ounces of water are poured into the inhaler, and two ounces of hydrogen dioxide and one dram of dilute sulphuric acid (U.S.P.) added. To this solution, one-grain tablets of permanganate of potash are added one by one, until all the nascent oxygen has been liberated. The gas is driven into the desired cavity by

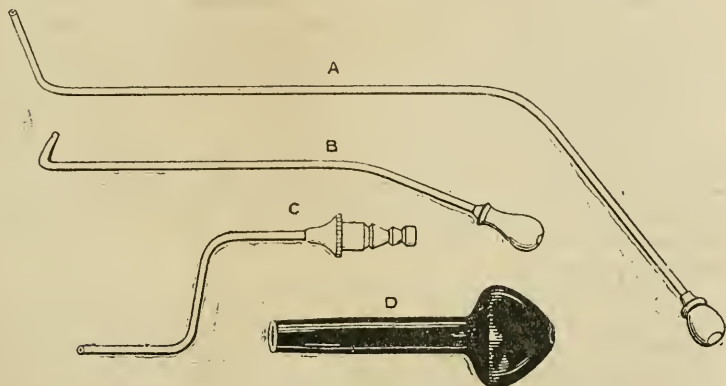


FIG. 2.

means of an ordinary bulb, or by the compressed air apparatus. This method does not compare with the method of generating ozone already described, and is more applicable for the home treatment of the patient where this is desired.

In applying ozone to the nose or accessory cavities, care should be taken that the patient does not inhale the ozone. This may be avoided by allowing the vapour, which is under the control of the patient, to pass only during the acts of expiration, the cut-off being closed during inspiration. The applications need not be made for more than ten to twenty minutes, and should be repeated not oftener than two or three times a week. As regards the constitutional effects, I have noticed, in some cases, headaches which persisted for several hours after the treatment; but in each of the cases in which this occurred it could always be traced to the fact that the patient had not controlled the cut-off properly, and had inhaled a considerable amount of ozone. Where the method was carried out correctly, no bad effects were ever complained of.

As regards the local effects, these were not only good but even striking. In a case of chronic antral disease, in which the discharge had been profuse, yellow, and purulent, after the second application the discharge almost entirely lost its purulent character and diminished very much in quantity. After fourteen treatments during a period of ten weeks, the case appeared cured, and the artificial opening in the alveolus was allowed to close.

In a case of maxillary sinusitis combined with empyema of the frontal sinus, which had been treated by oxygen without success, a similar change in the quantity and character of the secretion took place, and although this case is not yet cured the improvement is very marked. In three cases of chronic suppurative otitis media, which have been treated by this method, in one case the suppuration has ceased entirely; in the second there is still an occasional discharge; and in the third case the character of the discharge has improved very much, although the treatment has not been continued sufficiently long to give definite results.

I have also used ozone in two cases of ozæna, and the results thus far have been encouraging. Ozæna, however, is a pathological condition of such a chronic character that I abstain from comparing the results obtained with those following other methods until I have had them under observation for a longer time.

As regards the bacteriological investigation of this subject, I would state that the ozone not only inhibits the development of the cultures from the micrococci pyogenes aureus and albus, and other micro-organisms, but also destroys these germs in the culture medium. Where the ozone is present in sufficient quantities, even the culture medium is attacked and oxidized.

Ozone is a most useful agent in the treatment of suppurative diseases of the nose and ear, but it should be used with the precautions that are required with other agents of this kind. Bichloride of mercury has powerful corrosive properties, but this does not debar us from using it in its diluted solutions for its excellent antiseptic qualities, and the same principle refers to ozone. When used as I have described it in this article, I have never seen any injury from its application. In one case in which the application was too prolonged, a condition somewhat resembling an acute coryza was produced, which, however, had disappeared the following day.

The results which I have thus far obtained from the use of ozone in the treatment of purulent diseases of the upper respiratory passages, have been of such a satisfactory nature that I feel encouraged in its use. Where the physician has a good induction coil, the method is of trifling expense, as the ozone is obtained from the oxygen of the atmosphere with which we are surrounded. The technique is simple and its application presents no difficulties.

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## SOCIETIES' MEETINGS.

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### AMERICAN LARYNGOLOGICAL ASSOCIATION.

May 4th, 1897. (Abstracted from "Med. Rec.," N.Y., May 8th, 1897.)

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President—CHAS. H. KNIGHT.

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The PRESIDENT delivered an address dealing chiefly with the value of asepsis in clinical work ; the value of the laryngoscope in relation to the singing voice ; the Röntgen rays; and, finally, a most moderate view of the need for vivisection.

#### *Guaiacol as an Anæsthetic in Minor Operations on the Nose and Throat.*

Dr. JAMES E. NEWCOMB (New York City) read a paper with the above title. A five per cent. solution of the drug in olive oil is used whose resinoids and albuminoids are removed by dried sulphate of zinc and its fatty acids by alcohol. This is used in aural practice by instilling a few drops of the warm solution into the ear. In nasal surgery a soaked plug must remain *in situ* for from fifteen to twenty minutes. The general result of the author's investigations is that guaiacol is superior to cocaine when used on skin surfaces, but not equal to it on mucus surfaces.

*Submucous Hæmorrhage of the Vocal Cords.* Dr. S. W. LANGMAID (Boston).

In all cases the situation of the rupture was at the junction of the middle and anterior thirds of the cord. Two of the patients were men and three women. All were of sudden origin, and were accompanied by hoarseness, vocal inability, and limitation of the higher register. Of the patients, four were singers and one an actor. The tumours were all globular, except one, which was diffuse. Treatment consists of rest, topical astringents, and tonics.

#### *Hysterical Dysphagia.*

Dr. A. COOLIDGE, jun. (Boston), read this paper. It had been noted by Hofmann in 1733. It seemed to occur about once in every five hundred cases at the Massachusetts General Hospital (nose and throat service). It was most frequent in women, but might occur in men and children. The onset was sudden, and might result from the temporary lodging of a foreign body in the gullet, the symptoms being pain, a sense of constriction, and a feeling as of a foreign body. In addition to removal of any neighbouring lesions the passage of the sound was recommended.

In the discussion, Dr. T. HUBBARD attributed it to saccular dilatation of the stomach. Dr. J. H. LOWMAN had cured a case by suggestion. Dr. GLEITSMANN had cured a case by treating an enlarged lingual tonsil, Dr. SWAN agreeing with this as a usual cause. Drs. S. JOHNSTON and

J. W. FARLOW had seen cases due to impaction of cerumen in the ear. Dr. EMIL MEYER had reported a case of congenital stenosis in a child. Dr. BRYSON DELAVAN believed some local lesion to be always present. Dr. LAINGMAID attributed the cause to anæmia. Dr. DALY referred to a case he had considered hysterical, where the patient died suddenly three days later.

*Bacteria of the Normal Nose and Bactericidal Properties of Nasal Mucus.* Drs. W. H. PARK and JONATHAN WRIGHT.

The works of previous investigators were first given, and then the observations of the speakers. Thirty-six normal noses were examined. The vibrissæ were removed by sterilized scissors, and the entrance to the nose washed with bichloride solution; swab cultures from the interior were then made, thirty of these giving positive results. The nasal mucosa of two rabbits was found to contain bacteria. The mucus was inhibitory to anthrax. The scantiness of the microbes in the human nose might result from five causes. (1) Gravity—the fluids running down would clear away the micro-organisms; (2) this is assisted by the cilia; (3) the mucus was not a good culture medium for most bacteria; (4) the vibrissæ tended to keep the nose free; (5) there are but few bacteria in ordinary tidal air. One drop of a virulent culture of bacteria was dropped into the nares of two rabbits, which both died on the second day.

*The Treatment of Chronic Affections of the Tonsils.* Dr. GLEITSMANN (New York).

The speaker dwelt upon the troubles caused by small tonsillar concretions, and upon the adherence of the tonsil tissue to the anterior pillar, and also on the occurrence of tonsillar flaps and folds. He then showed a punch working in an antero-posterior direction.

Dr. FARLOW also showed several tonsil hooks and forceps.

*R. Lake.*

## THE LARYNGOLOGICAL SOCIETY OF LONDON.

*Ordinary Meeting, May 12th, 1897.*

HENRY T. BUTLIN, Esq., F.R.C.S., *President.*

### DISCUSSION ON THE USES OF TURBINOTOMY AS APPLIED TO THE INFERIOR TURBINATED BODY.

*Opened by Dr. DUNDAS GRANT.*

TURBINOTOMY, or turbinectomy (perhaps better conchotomy or conchectomy), may be practised on the superior, middle, or inferior turbinated body, and it may be either total or partial. We might thus speak of total middle turbinectomy, total inferior turbinectomy, etc., or of anterior middle turbinectomy, posterior middle turbinectomy, and so forth. We are only concerned at present with the inferior turbinal and the operations of total inferior turbinectomy, anterior and posterior inferior turbinectomy

*Total inferior turbinectomy* is chiefly practised by means of Mr. Carmalt Jones's ring-knife or "spokeshave," of which the cutting part is now made in a curved form, so as to be convex on the side next the turbinal, and concave on the one next the septum—an advantage when there is a septal outgrowth.

*Partial turbinectomy* may be performed by means of punch-forceps or other instruments, but Grünwald's "typical" operation for resection of the anterior extremity of the middle turbinal affords a method applicable to all. In this a notch is cut in the neck of the middle turbinal, and the piece thus marked off is readily removed by means of a hot or cold snare.

*Anterior inferior turbinectomy* is, therefore, to be effected by means of an incision along the anterior part of the line of attachment of the turbinated body, and the peninsula thus formed is removed by means of the snare. The part should be thoroughly cocaineized, and nitrous oxide gas may be administered. This operation opens a free road into the middle part of the inferior meatus, which is much wider than the anterior, and the stump of the turbinal acts like an additional incomplete septum. The hæmorrhage is slight and easily controlled, as the portion removed is the furthest from the entrance of the large blood-vessels at the sphenopalatine foramen. The anterior obstruction being removed, no further enlargement of the passage may be required; but if, later, removal of the posterior half is called for, it is readily accessible for operation. At the same time the anterior operation removes a cause of negative pressure, and thus eliminates a source of engorgement of the posterior parts which may then subside without further operation. The part removed, though doubtless of functional value, is not considerable, and is very frequently a source of discomfort.

*Posterior inferior turbinectomy* may be in the same way carried out by means of a scissors cut directed obliquely upwards and backwards from the lower border of the turbinal, the snare being then applied to the posterior portion. In some cases the snare alone is sufficient. The "spokeshave" may also be used to cut partially through the turbinal from behind, and the snare may be introduced into the cut.

The *indications* for these operations are disturbances to health, comfort, or function resulting from nasal obstruction produced by enlargement of the inferior turbinated bodies, when this does not yield to simpler treatment, or when not likely to do so, especially if the time available for treatment is limited.

In general these are diseases of the nose, pharynx, and larynx, but incidentally diseases of the ear directly dependent on these.

The indications for *complete turbinectomy*, or "spokeshaving," are those above mentioned under the conditions that the disturbances are sufficiently severe to justify exposure to the risk of a possibly considerable hæmorrhage and pyrexia; that the obstruction is due to enlargement of the posterior as well as the anterior part of the turbinal; that the patient is prepared to remain in bed and under observation for several days; and that there is some special call for prompt radical relief.

*Posterior inferior turbinectomy* is indicated when the obstruction is

due to enlargement of the posterior part, the anterior portion being normal, or being readily reduced by cocaine, or having been previously removed without affording sufficient relief, more particularly if the snare alone has been inefficacious.

*Anterior inferior turbinectomy* is indicated when there is obstruction due to enlargement of the anterior part, not sufficiently diminished by cocaine to justify dependence on galvano-caustic methods. (When there is a deviation of the septum it has to be considered whether the removal of the septal outgrowth or anterior turbinectomy is more easy to accomplish.) When the enlargement is both anterior and posterior, the anterior operation may be performed first (unless there is urgent necessity for immediate clearance), and the posterior one subsequently if required.

The *results of complete turbinectomy* are usually most excellent and frequently brilliant, and Mr. Carmalt Jones deserves credit for drawing attention to its value, even though we limit the scope of its applicability much more than he has done.

Mr. Atwood Thorne has looked up the records of the cases in which I have operated, and finds about thirty-five of *complete turbinectomy* out of roughly some 11,000 cases of mixed throat, nose, and ear cases. Only eighteen could be got to come up for re-inspection, and unfortunately the notes have been too meagre to allow of drawing deductions from any of the others. Out of the eighteen (of whom twelve were males and six females, varying in age from fifteen to sixty) nine were completely freed from their primary symptoms, and nine relieved. Notable regeneration of the turbinal body took place in six, and very little in the remainder. The formation of crusts disappeared within a short period in seventeen, but in one it has persisted since October, 1896. In all the general condition has improved. Hæmorrhage was very considerable in somewhat under a third of the cases (five), moderate in nearly one half (seven), and practically absent in the remainder (five). In one case the hæmorrhage was such as to place the patient's life in considerable jeopardy, but her want of care was chiefly accountable for it.

We have to report twelve cases of *anterior turbinectomy*, of which the results are as yet not available in more than eight, in five of whom the nasal symptoms are reported as cured and in two as relieved. The restoration of nasal breathing seemed quite adequate. In none was there any ground for anxiety, and the bleeding after the operation was slight in four, almost absent in four, and profuse in one. In the last case the patient took a long journey, and omitted to call in her local doctor, by whom the anterior hæmorrhage could easily have been controlled.

In view of the ease and safety attaching to the operation of anterior turbinectomy, as well as the comparatively good results as regards restoration of nasal patency, it is advisable to adopt it if only as preliminary to a subsequent posterior operation. The operation of complete turbinectomy involves a fairly considerable amount of risk from hæmorrhage, but there are circumstances in which, after due explanation to the patient, it may be justifiable to recommend its adoption.

These opinions are founded upon the consideration of a comparatively limited number of personal observations, and are offered as open to

modification according to the results of the collective observations of the members of the Society.

Mr. CRESSWELL BABER said he had done inferior turbinotomy with the "spokeshave" thirteen times in nine patients. He considered it of value in cases of nasal obstruction due to enlargement of the inferior turbinated bodies which could not be relieved with the snare or the galvanic cautery. These milder measures should first be tried, except in cases where the obstruction is manifestly due to enlargement of the bone itself. The results on the whole were very satisfactory. Several of the patients became distinctly stouter and more robust after the operation. He had not met with any troublesome hæmorrhage or complaint of dryness in the nose or throat. In one case he had seen a regrowth of soft tissue. He thought the operation was especially useful in cases of bad deflection of the bony septum, in which, after removing all the projecting portion of the septum possible, there was still insufficient breathing space.

Dr. LAMBERT LACK said that his experience of complete turbinectomy had been very limited, as he held the opinion that, except possibly in some extremely rare and altogether exceptional cases, complete relief could be obtained from the symptoms arising from enlargement of the inferior turbinated bodies by other and better means. He preferred removal of the bone by means of scissors.

Mr. HERBERT TILLEY showed an enormous moriform hypertrophy of the right inferior turbinate bone which he had recently removed. The overgrowth extended from the anterior to the posterior naris, which latter it almost completely filled, and was only slightly reduced on cocaineization. He removed it with considerable difficulty by means of a Blake's snare, and left the turbinate bone in its entirety, and the patient with complete freedom of respiration. The speaker's experience in complete turbinectomy had been limited to three or four cases. As regards the complications, he thought the possibilities of "dry throat" should be borne in mind, for he knew of two singers—one making rapid progress at the Academy—who since the operation had had to completely give up their studies on this account only. A most careful selection of cases should be made, and he believed that in the vast majority partial anterior turbinectomy would be found to be amply sufficient to meet the needs of the case.

Dr. SEMON stated that, having no personal experience of the operation, he wished to have some fuller information on two points which seemed to him of considerable importance, viz.: (1) the question of secondary hæmorrhage, and (2) the physiological question of the effect of so great a clearance of the nose proper as that effected by total turbinectomy with regard to the drying up of the mucous membrane of the pharynx and formation of crusts. With regard to the first point, he had been told by a leading general practitioner that within a very short time he had been called to four of his patients in whom turbinectomy had been performed, and in whom serious secondary hæmorrhages had occurred several days after the operation. In one of these cases he had been compelled to sit up the whole night with his patient. With regard to the second question, Dr. Semon reported a case he had seen only two days

before the meeting. A young student of theology had frequently suffered from laryngitis and loss of voice. He had consulted a London specialist, who had discovered an obstruction in the nose and had removed both lower turbinated bones. The immediate effect of the operation had been one of great relief to the breathing; two months afterwards, however, the patient began to suffer from great dryness in the throat, which gradually had become almost intolerable, and from the formation of crusts which he could only hawk up with much difficulty. It was quite certain that these symptoms had only made their appearance *after* the operation. At the same time his laryngitis had become much more pronounced and was now practically always present. On examination the nose presented exactly the same aspect as that seen in old atrophic rhinitis, *i.e.*, the nasal passages in their lower part represented one large channel through which the pharyngeal mucous membrane, and, on swallowing, the movements of the Eustachian muscles, were clearly visible. The whole posterior wall of the naso-pharynx and pharynx proper was dry and glazy, and was to a great extent covered with a yellow, firmly adherent, non-odorous crust. The pharynx itself looked congested, and the vocal cords were very red and much relaxed. This condition so entirely corresponded with what one would theoretically expect from removing a physiologically important structure, whose duty it was to moisten and warm the inspired air and to retain impurities penetrating into the air passages during the act of inspiration, that he felt compelled to draw attention to that possibility, and to inquire whether this effect had not been more frequently observed. It had been very interesting to him to hear from Dr. Tilley's remarks that in the cases of two singers the same effect had been observed and had prevented the patients from following their vocation. In the case just detailed he was afraid the result would be the same, and this seemed to him so grave a contingency that he thought it right to draw attention to it.

Dr. SCANES SPICER said surgical interference was needed to restore the natural airway, and to allow of the natural contact of the air with the nasal mucosa. As far as reduction of the soft parts goes, we have all been in the habit of using the snare, cautery, and scissors for years for mulberry growths and polypoid flaps; but it is well known that there are cases which do not yield even to prolonged use of such means. So that Mr. Carmalt Jones is in the position of having brought forward a new instrument, by means of which it is possible more efficiently, more safely, and more speedily than ever before to remove a common cause of nasal obstruction. It is true that in using this we remove at the same time a small fraction of the mucous membrane, but we restore to full activity the immensely larger fraction with which the due amount of air was not beforehand able to gain contact. Besides, often after operation a flap of mucosa is seen presenting very much the appearance of a small regenerated inferior turbinate, not large enough to obstruct. Speaking from a large number of cases in his own practice and that of others, he thought that in suitably selected cases reduction of the inferior turbinate was of the greatest possible value, and that Mr. Carmalt Jones's instrument, used with judgment and discretion, was a very serviceable addition

to our armamentarium. Only those cases were suitable for removal of bone in which previous reduction of soft parts was insufficient, or in which other complicated procedures could be avoided by a simple reduction of bone, such as septum straightening, difficult and complicated spurs, etc. Judgment was also needed in the amount of bone to be removed. Sometimes the anterior, sometimes the posterior part caused the obstruction ; but usually a slice from behind forwards appeared to give the best result, and one's aim was to remove only so much as was necessary to get free nasal respiration.

There was one point in Dr. Grant's excellent introduction from which he differed, and that was that the reduction should be done at two operations—the anterior and posterior halves on different occasions. He thought this was unnecessary, and gave the patient additional suffering. Dr. Spicer usually operated with the patient in a sitting posture under cocaine and gas or gas and ether. An objection had been raised that brisk hæmorrhage took place. It was unusual, and he did not usually plug at first, but kept patient at rest for some days in bed. Secondary hæmorrhage sometimes came on, on withdrawing the plugs or otherwise. It might be severe, and great caution was necessary that the patient could have effective aid if needed.

Dr. WATSON WILLIAMS (Bristol), referring to the question of turbinectomy as distinguished from the less radical operation of partial turbinotomy, stated that he spoke under the disadvantage of never having had recourse to the procedure. His attention was particularly directed to this subject by a paper read at the meeting of the British Medical Association at Bristol, in 1894, by Wyatt Wingrave, who brought forward a very complete summary of two hundred cases of turbinotomy performed at the Central London Throat Hospital within a comparatively short space of time. He had, in fact, obtained a Carmalt Jones first "spoke-shave," but although he had charge of a considerable clinic at the Royal Infirmary at Bristol—a city that afforded all the extrinsic conditions which tended to cause the development of hypertrophic rhinitis in marked degree—he had yet to see the case which, in his opinion, justified recourse to such a radical measure as complete turbinotomy, and which could not be adequately relieved by other methods to which allusion had been made by previous speakers (scissors, cautery, snare, etc.)—measures which were less dangerous, more under control, and less likely to be followed by unfortunate secondary complications. Having regard to what he had seen and heard of turbinectomy from various sources, he was convinced that the operation was performed by some operators with unjustifiable frequency, and he thought that they were to be congratulated on the subject having been brought forward by Dr. Dundas Grant, who had advised recourse to the operation in such guarded and temperate language as virtually to damn with faint praise the views of ardent enthusiasts of turbinectomy, and who had so definitely stated his conviction that turbinectomy ought to be restricted to a very narrowly limited class of cases, Dr. Grant having had recourse to the radical operation in only thirty cases out of more than eleven thousand patients coming to his clinic. He felt that he was at one with Dr. Dundas Grant on most points in his

address, but he could not help regarding the later instrument of Mr. Carmalt Jones as one to be discarded, inasmuch as its use appeared to involve the almost complete removal of the lower turbinals, which one had every reason to consider a very important physiological structure; and for his part he believed that it was generally far better and more scientific to employ other methods of removing portions of the hypertrophied turbinals which were more under the control of the operator.

Dr. WILLIAM HILL considered it would be difficult to criticise in an adverse sense the practice which Dr. Grant had advocated in reference to partial turbinectomy. Anterior and posterior turbinectomy with the snare had been practised for many years by most present, but the removal of a portion of the bone was a recent development, and he could testify to the excellent results obtained by the use of the scissors. In reference to the employment of Carmalt Jones's turbinotome, he (the speaker) did not aim at what was called complete turbinectomy with that instrument, and as a matter of fact the *complete* removal of an inferior turbinate was a very difficult matter. Jones's turbinotome was an instrument of precision by which a wide or narrow longitudinal slice, with or without bone, could be removed from the enlarged inferior turbinal. The larger operation was called for when an enlarged turbinal coexisted with a very narrow condition of the nasal cavities. He had seen very severe bleeding after its use, and recommended styptic colloid if hot water at the hæmostatic temperature failed to stop hæmorrhage.

Dr. STCLAIR THOMSON feared there must be something very seductive about this operation, since one instrument maker has sold more than a hundred "spokeshaves." Personally he was not aware of any cases in which the after effects had been harmful, but it took time for these to develop. Others, however, had demonstrated how the nose lost its function of warming and moistening the air when its mucous lining had been at all extensively destroyed. He referred to the experiments of Freudenthal, of New York, on patients who had been discharged as "cured" of nasal stenosis, but who later on fell into his hands with all the symptoms consequent on the loss of the warming and moistening function of the Schneiderian membrane. It was well to remember that this turbinal hypertrophy was in many cases a consequence of a condition which could not always be remedied, such as a stenosis of the bony walls of the nose, either congenital or consequent on adenoids which had atrophied. One consequence was already apparent in every one of these cases which had been demonstrated at the meeting, and that was that there was a marked compensatory hypertrophy of the middle turbinals. If this went on these patients might return to be freed of this, and in that case there would be a last good-bye to the hygrometric functions of the nose, and they would be in a worse state than if they had been content with their more or less buccal respiration.

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Ordinary Meeting, April 14th, 1897.

MR. CHARTERS SYMONDS, F.R.C.S., in the Chair.

*Recurrent Dendriform Hyperplasia of the Left Inferior Turbinal, with Microscopic Sections.* Dr. PEGLER.

G. S., aged thirteen. There had been almost complete nasal obstruction, owing to the presence of lobulated inferior turbinal hypertrophies in both nasal fossæ, and adenoids in the naso-pharynx. The case was exhibited on account of the persistent recurrence of the growths after removal with the snare, and cauterizations, especially on the left side. He had not previously met with this tendency in similar cases. After having cleared away all visible traces of these hypertrophies in three sittings, it was found that a considerable mass of tissue reappeared by the end of a week. This happened after five more consecutive snarings, when the proliferating power of the mucous membrane became apparently exhausted.

*Case of Fibroma of the Right Vocal Cord in the Region of the Anterior Commissure.* Dr. PEGLER.

S. K., aged forty, had complained of hoarseness a few weeks. The little tumour was attached to the right vocal cord by a short pedicle, and was projected between the cords on phonation. The right cord was parietic, and moved but little, the cause being apparently a mechanical one. The free movement of the left cord gave an appearance at first sight (during abduction) as though the growth were attached to it, but careful inspection under cocaine had shown that though temporarily resting on the surface of the left cord, it was not actually attached to it.

Dr. HERBERT TILLEY asked if Dr. Pegler could explain the extreme paresis of the right vocal cord. The small growth was so freely movable that it seemed impossible for it alone to produce the immobility, which was so like that due to pressure on a recurrent laryngeal nerve.

Dr. SEMON remarked that the immobility was an important point, because, as a rule, it was a leading feature in malignant cases, and nearly always absent in benign growths—at any rate in their early phases.

Dr. PEGLER could not give any explanation except the mechanical one of hampering the action of the cord.

*Tubercular Infiltration and Ulceration of the Soft and Hard Palate.* Mr. DE SANTI.

Patient is a man aged forty-four. The patient was quite well up to Christmas, 1896. He then noticed his palate was sore; this soreness increased, and swelling supervened; swallowing became difficult, and was painful.

When seen the third week in January the appearances of the soft and hard palate were those of syphilitic ulceration—whitish patches and serpiginous ulcerations. No history of tubercle. He was put on iodides, but the swelling and ulceration increased. Later, the ulcers were

cauterized, but getting no better the parts were thoroughly sharp-spooned, and subsequently lactic acid well rubbed in. This was five weeks ago. He is now worse, with great swelling of the parts and infiltration of the uvula. No laryngeal view can be obtained; his breathing is occasionally difficult, and he has pain on swallowing. There is no lung mischief. Tubercle bacilli have been found in the pus from the ulcerations.

*Case of Tubercle or Lupus of the Soft Palate and Uvula.* Mr. DE SANTI.

Patient is a woman of thirty-six. She had had soreness and swelling of soft palate and uvula for one year; the parts had been cauterized, but without benefit. Lately the swelling had increased; never very painful. Now there is swelling and infiltration, with small tuberculous nodules of the soft palate and uvula. The nodules had been sharp-spooned and lactic acid rubbed in, but no great improvement has followed.

No lung mischief in patient. Tubercle bacilli found in the secretion from the nodules. This case and the previous one were shown for an opinion as to further treatment.

Dr. SEMON suggested arsenic in increasing doses, and if this failed to relieve then injections of tuberculin.

*Bilateral Abductor Paralysis in a Man aged Thirty-six.* Dr. FURNISS POTTER.

W. A. came to the hospital in June, 1895, with stridor, and complaining of trouble in breathing of two years' duration. The power of abduction of the left cord was seen to be markedly impaired, the right cord was similarly affected, but in slighter degree; this has increased, and at the present time the failure of abduction is very considerable.

The physical signs in the chest—viz., dilated subcutaneous veins below left clavicle, flat percussion note left apex, absence of vocal resonance and fremitus, and diminished respiratory murmur—indicate intrathoracic pressure as a cause of the paresis.

History of syphilis twelve years ago.

In January, 1894, tracheotomy was performed for relief of urgent dyspnoea (in the Oxford Infirmary).

The patient states that every few weeks the attacks of dyspnoea are worse, and that he coughs up much yellow matter, after which the symptoms are relieved.

He has taken large doses of iodide of potassium, but with no improvement.

A point of interest in the case is whether the implication of the right vocal cord is due to extension of pressure to the right recurrent nerve, or whether it is affected by way of the nuclei (on the theory of Sir George Johnson).

Dr. Stoker has kindly allowed the case to be shown.

Drs. HALL and SEMON pointed out that abduction was considerable, and was best seen if the patient was told to phonate for some time, and then inspired naturally.

Mr. BOWLBY thought a spinal nerve lesion would explain the condition of things, and instanced a case which he had watched for some years, in

which ultimately tabetic symptoms manifested themselves. He thought that if a growth in the chest produced double paralysis, there would be complete paralysis of one cord at least, and pressure on the trachea as well, which was not the case in this patient, where there was only some abductor paresis of both cords.

Dr. POTTER agreed that the term "paresis" would be better than "paralysis," as he did not wish it understood that the paralysis was complete.

*A Case in which Bilateral Middle Turbinectomy has been Performed to facilitate Removal and Treatment of Obstinate Recurrent Nasal Polypi, and to relieve Obstruction to Nasal Respiration which had resisted other Measures.* Dr. SCANES SPICER.

A medical man, aged thirty-one, sought advice in February, 1895, for nasal troubles. His discomfort commenced with a cold in 1893, when he lost his smell, and was never after that free from nasal stuffiness, sneezing, and rhinorrhœa.

On rhinoscopy, polypi of ordinary character were seen hiding the middle turbinates from view, and extending down over inferior turbinates. The polypi were thoroughly removed by snare and galvano-cautery, and chromic acid used at repeated sittings. It was observed that the middle turbinate areas always looked reddened and turgid. From time to time intranasal suppuration of indeterminate source was noticed. Similar procedures were repeated on and off several times until June, 1896, when the stuffiness, which had persisted all along, became more troublesome, and middle turbinectomy was suggested with the view indicated in the head-line; it was decided at first only to remove the anterior part of middle turbinate under cocaine. This was done. There was much pain and bleeding, as the parts were very vascular. Cocaine twenty per cent. solution did not appear to act very well. Considerable relief was experienced, but things were not quite satisfactory. Later on he had an attack of erysipelas, which lasted a week. During this the obstruction became as bad as ever, but the smell returned for a time.

Early in March, 1897, the symptoms got much worse again, and polypi were seen and felt to be obstructing posterior nares, and projecting into naso-pharynx, as well as surrounding the median part of middle turbinates. Dr. Spicer thought the posterior two-thirds of the middle turbinates had undergone polypoid degeneration, causing the cells of bone to be distended, and that it was absolutely necessary to reduce it in order to clear the nose and treat exposed ethmoidal cells containing polypi. After a further consultation this was agreed on and performed under gas and ether, Dr. Hewitt giving anæsthetic in sitting position. On April 9th, under cocaine, a further snaring of polypi projecting from ethmoidal cells took place.

On April 13th patient reports he has never been so clear in nasal respiration, or felt so well for whole of last four years as now; and there is no nasal obstruction, and stumps of polypi are insignificant.

In this case it is too soon to claim an absolute cure, but patient's

symptoms are relieved, and it is now easy to treat polypi if they reappear. Moreover, other sinuses, as frontal and sphenoidal, may be affected. In fact, from time to time, over both frontal sinuses there have been redness, bogginess, and tenderness, with headache. There is none, however, at present. It is much easier now to attack sphenoidal sinuses or to drain the frontal, should such a procedure become necessary in the development of events.

*A Case in which Bilateral Inferior and Middle Turbinectomy has been Performed for Aggravated and Persistent Distress depending on Morbid Intranasal Conditions.* Dr. SCANES SPICER.

M. D. was sent to St. Mary's Hospital in February, 1897, with a request that something radical should be attempted to cure her, as she had had to resign her situation. Polypi had been removed by a specialist, the galvano-cautery used several times, and numerous lotions, sprays, etc., locally; but she had got no relief from her symptoms, which were constant frontal headache, pain and tension referred to the bridge of the nose, shortness of breath, mental depression, insomnia and restlessness, associated with obstruction of nose, which was always present, but varied in degree, and was always worse when she lay down. Her nasal respiration was very imperfect, and was, though but slightly, improved by cocaine. The inferior turbinate bodies were considerably enlarged, especially the posterior two-thirds; the middle turbinates were tightly pressed against the septum, and enlarged; in concavities of middle meati were numerous small polypoid masses with muco-purulent secretion, which was foetid and profuse.

The operations mentioned in the head-line were carried out in two stages at intervals of a week, after free use of ten per cent. cocaine spray.

At the first sitting the inferior turbinates were removed with Jones's turbintome; soft flaps were trimmed; very little hæmorrhage took place; iodoform was insufflated, and a plug of creolin gauze inserted on each side. There was slight subsequent serous and hæmorrhagic oozing, and the plugs were removed on the fourth day, the nose being kept clean, as usual, with an alkaline wash, iodoform insufflations, and a soothing ointment applied.

A week later the anterior portions of middle turbinates were removed with Grünwald's forceps and the cold wire snare, and the posterior portions with the turbintome; stumps of polypi were snared and curetted cautiously with Grünwald's curettes. No plugs were used, but wounds cleaned and dressed as before. There was not much pain at operation, and none after. The removed middle turbinates showed polypi in the component cells, some of which latter were enlarged and their walls thinned, giving rise to a cystic appearance. The patient was kept in bed for a few days, but there was no rise in temperature nor after trouble. The relief of her symptoms commenced at once, and is now, after about three weeks in hospital and a month in the country, complete, though the wounds in the nose have not yet completely healed, and scabs are occasionally thrown off. It would be too much to say that all her nasal disease has been radically cured; but any recurrence of polypos here

would be now easy of access and treatment, as well as any treatment of sphenoidal or frontal accessory sinuses, should these prove to be involved in the polypoid and purulent processes.

These cases are brought forward as an example of the expediency in selected cases of carrying out without delay measures which may seem to some severe, but which are aimed at the relief of troubles which often completely incapacitate their victims from useful work, which usually cause great mental depression and general ill health, and which may otherwise require an indefinite continuance of milder and often quite inadequate means. When such operations are carried out under proper illumination of the nasal cavities, with a due knowledge of and respect for the important anatomical relations of the parts, not only can these operations be effected with safety, but often with no constitutional reaction, and with great probability of success.

Mr. CHARTERS SYMONDS asked if Dr. Spicer experienced much purulent discharge after removal of the turbinates, as he had noticed it in some cases.

Dr. SPICER answered in the affirmative.

*A New Denture for Drainage in Diseased Antra.* Dr. HILL.

The main characteristics were—(a) a fixed tube, (b) a trap-door at the lower end of the tube which could be easily opened without removing the denture.

*Report on Case of Nasal Obstruction.* Dr. BENNETT.

The report referred to the case of Miss M., shown at the January meeting. The first report was that the growth was a squamous epithelioma, but further examination proved that the correct diagnosis was tuberculosis of the inferior turbinal. This was in accordance with the opinion formed from the clinical appearance.

*Case of Malignant Growth of the Larynx.* Dr. BENNETT.

Mr. H., aged fifty-six. He was sent to the Leicester Infirmary on account of hoarseness, which first began about last Christmas. There was an almost complete absence of pain. The epiglottis was twisted to the right side. The right half of the larynx was immovable, and there was an ill-defined swelling in the pharynx of the right side. One gland on the right side of the neck is now enlarged.

Dr. LACK thought the case too advanced for operative treatment.

*Case of Leontiasis.* Dr. BENNETT.

A middle-aged man applied at the Leicester Infirmary on account of left lachrymal obstruction. There is considerable enlargement of the nasal bones. The floor of the nose and the lateral wall are much hypertrophied, with bony thickenings. The condition has lasted for fifteen years, and now causes much nasal obstruction and blockage of the left lachrymal duct.

Dr. HILL thought that removal of the turbinate bones might relieve the obstruction of the nasal duct.

*Tubercular Ulceration of Nasal Septum (?)* Dr. WATSON WILLIAMS.

Miss G., after suffering from a muco-purulent discharge, noticed about fifteen months ago some blocking of the right nostril. Seven months later (July, 1896) when seen she presented a smooth, bluish pink, sessile growth, the size of half a filbert, on the right side of the septum. There was some discharge in the left nasal passage which formed crusts, but no obvious disease. The growth was removed, and microscopically proved to be tubercular, though no bacilli were visible. The growth had begun to caseate and break down in the centre.

October 6th.—The tubercular deposit had spread through to the left side, appearing there as a pale pink outgrowth with a few slight crusts on the granulations. The base of the old growth was dry, with just a little secretion. Since then the septum on either side and the inferior turbinal have been repeatedly curetted, and lactic acid applied. There is a nodule in the posterior pharyngeal wall.

Dr. Williams desired to know whether members considered the case lupus or tubercle.

Dr. GRANT thought it tubercle, because it extended farther backwards than lupus, which generally attacked the cartilaginous parts.

*A Case in which Sensations of Suffocation in a Highly Neurotic Woman were Temporarily Relieved after Galvanic Cauterization of Varicose Lingual Veins.* Dr. DUNDAS GRANT.

The patient had suffered for six years from the condition above mentioned, and was seen in 1894, when the only objective condition was a minor degree of varicosity of the veins at the base of the tongue. Astringents were applied and aperients freely administered, but no pronounced relief was obtained until the galvano-cautery was applied to the region mentioned. Relief from the suffocative attack ensued, and the patient disappeared until now, when she returned, complaining of a re-development of the suffocative sensations, and stated that during the three or four months following the previous cauterization she had been free from the alarming sensations. At present the nervous condition of the patient is very obvious, there is great rapidity of the pulse (reaching occasionally 118 per minute), and a marked diminution of the pharyngeal reflex, but no hemianæsthesia or any of the more pronounced stigmata of hysteria.

Dr. SEMON appealed to Dr. Grant for a definite explanation of the relation (if any) between the appearances present at the base of the patient's tongue, and any symptoms from which she had suffered. He did not consider that any diseased condition was present, and that the slight fulness of the venous radicles at the base of the tongue was no more than might be seen in any person in good health. He was emphatic in his protest against associating pharyngeal and laryngeal symptoms with such a common condition as seen in this case.

Dr. HERBERT TILLEY thought it unfortunate that Dr. Grant should have brought forward this case as an example of the so-called "varicose veins at the base of the tongue." He agreed entirely with Dr. Semon that such a condition as the patient presented would in all likelihood be

found in any healthy individual, and in the majority of those present. In the routine examination of patients he had often seen much greater fulness of the dorsal lingual veins, where, perhaps, they sought advice for some ear trouble and complained of no throat symptoms.

Dr. STCLAIR THOMSON had often seen a fulness of these veins, and generally noticed that they were associated with congestion elsewhere, *e.g.*, rectal hæmorrhoids, gouty manifestations, etc., and that a smart aperient often relieved them.

Dr. HILL had noted cases of varicosity where throat symptoms were present, but had not decided to regard them in the light of cause and effect.

Dr. SCANES SPICER had seen small black nodules on veins of base of tongue, which had ruptured and led to blood-stained expectoration. He frequently saw distended veins at base of tongue, but treated them by salines. Occasionally he had suspected that the coats of the veins participated in a general pharyngitis, but whether to such an extent as to entitle them to the term "phlebitis" he was doubtful. He should not call the veins abnormal in Dr. Grant's case.

Dr. DUNDAS GRANT, in reply, stated that he considered the slight enlargement of the veins a minor element, and that the beneficial effect of the cauterization was simply that of a counter-irritant which might have been applied in any other part. The influence was more psychical than physical. The region of the lingual tonsil was extremely well supplied with nerves, and among these there were branches from the superior laryngeal, irritation of which might readily produce sensations of discomfort in the larynx, and even excite muscular contractions. He thought that the venous congestion might act in this way. To illustrate the essential importance of the neurotic element, he reminded the Society of two cases which had been discussed before it—one of Dr. McBride's, in which a large tumour in this region had existed for many years without causing the patient any discomfort whatever, and another of Dr. Grant's, in which a very small cyst in the pre-epiglottic region in a highly neurotic woman had caused the greatest possible discomfort, this disappearing entirely upon its removal. The veins described dilated when pressure was exerted in the submaxillary region by means of the finger, or where enlarged glands or other tumours in the neck were present. He looked upon the appearance as occasionally symptomatic of such pressure, and thought it possible that occasionally these dilated veins might cause various symptoms which would be highly exaggerated in a neurotic patient.

Mr. CHARSLEY showed a lad whom he had operated on for *Sub-Hyoid Fistula of Congenital Origin*. He remained well for twelve months, when the mucoid discharge recommenced, and he asked for the opinion of the Society as to any method of treatment which could be recommended to ensure a more permanent result.

Mr. SYMONDS and Mr. STEWART recommended another dissecting operation, and quoted cases in their practice where a second or third attempt at removing the fistulous tract had been successful, and men-

tioned that sometimes the case cures suddenly after an apparently unsuccessful attempt at complete removal of the tract.

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### BERLIN MEDICAL SOCIETY.

31st March, 1897. (From the "Deutsche Med. Woch.," 22nd April, 1897.)

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HOLZ showed a patient with *Primary Syphilitic Affection of the Left Tonsil*.

ZADEK showed a specimen of *Œsophageal Carcinoma*, which had perforated the aorta and so caused fatal hæmorrhage.

KATZ, O. *On Diphtheritic Paralysis.*

Investigating the question of the origin of these paralyses and the part played in them by the central nervous system, Katz made a careful examination of three cases that had died of diphtheria in the Kaiser und Kaiserin Friedrich's Children's Hospital, using principally Marchi's method. The first case was one of a child of four years, who had died with symptoms of general ataxia and paralysis of the diaphragm. The spinal cord was found diseased from lumbar to cervical regions. The ganglion cells, specially of the anterior horn, were filled partly with quantities of black granules, partly with turbid material; the nucleus indistinct, and the shape of the cells was altered as if they had been blown up. (Marchi's method.) Further in the axis cylinder processes black granules were found in masses, partly at the edges, partly in the middle (myelin degeneration). This change was found both in the motor and in the sensory fibres. The glosso-pharyngeal and phrenic nerves were also seriously diseased in the same way. The muscle fibres of the diaphragm had undergone fatty degeneration. In the second case, a boy of six years, essentially the same changes, but in slighter degree, were found. In the medulla oblongata, the hypoglossus, accessorius, glosso-pharyngeus facialis, abduceus, and trigeminus were affected. A similar condition was present in the third case, with, in addition, marked affection of both oculo-motors.

Herr Katz considered the occurrence of fat granules in the ganglion cells as related to trophic disturbances; in such cases reabsorption of the fat granules made recovery possible, thus contrasting with cases in which actual death of the cells had occurred. From these results, as also from purely clinical considerations, the author held that the central origin of diphtheritic paralysis was established. (Here followed demonstration of microscopic specimens.)

BAGINSKY, A., thought that one found such severe paralyses with fatal ending only in diphtheria cases where serum treatment was commenced late in the illness—where, therefore, the toxins had plenty of time to produce their deleterious effects. He remarked that paralyses starting primarily in the nervous system must be sharply distinguished from those due to hæmorrhage or embolism in the spinal cord. With regard to the first case, he added that the child had suffered from obstinate constipation,

due, doubtless, to a total paralysis of the digestive tract: perhaps the vagus had something to do with this. Paralysis of the diaphragm he had seen in some other cases.

ISRAEL, O., said that such fatty degeneration occurred only *intra vitam*, and never *post mortem*. Hauser's assertion of the contrary was a mistake.

HIRSCHBERG during the last ten years had seen paralysis of accommodation two hundred and fifty times, and had always considered it of nuclear origin. It was never unilateral and always recovered. He had never seen paralysis of the nervus opticus.

GUTTMANN had twice seen bilateral abduceus paralysis after diphtheria.

ROSIN held that the granule formation seen in the microscopic specimens was at least partly normal. These granules were to be found in normal ganglion cells treated by Marchi's method. In the new-born this pigment was rare, but increased as the child grew older, so that by the fourth, fifth, and sixth year it was present in considerable abundance.

REMAK: Experiments on animals had shown that after poisoning with diphtheria toxin changes took place in the cells, but that paralysis occurred only after peripheral lesions. It was not yet settled whether diphtheria paralysis was of peripheral or central origin: and in his opinion the demonstration just given did not decide the question, because the cases considered were cases of severe general intoxication, and not of typical diphtheritic paralysis. Microscopic examination, from this point of view, was of value only in such cases as had suffered from ordinary typical post-diphtheritic paralysis and had died from some other illness. As a rule, the first and most essential clinical condition was paralysis of the soft palate, *i.e.*, of the part where the most marked local changes take place. In the same way a case was reported where diphtheria in a wound in the abdomen was followed by abdominal paralysis. All these facts were more in favour of a primary lesion of the peripheral nervous system; perhaps the central system might also be affected at the same time.

SENATOR agreed entirely with Remak. Diphtheritic paralysis he held to be thoroughly typical, and to begin mostly in the soft palate.

ROTHMANN, M.: Marchi's method was misleading; pigmentation such as appeared in many of the specimens shown was produced in healthy nerves by the method.

BAGINSKY, A., thought that Herr Katz did not wish to maintain that diphtheritic paralysis was always absolutely and exclusively of central origin. The three cases, however, were certainly to be regarded as genuine diphtheritic paralyses: a type did not exist.

FRAENKEL, B.: There could be no denying the existence of a certain type. As a rule paralysis of the palate came first, then paralysis of accommodation. The palatal paralysis was no reflex affair, but a genuine paralysis: sometimes it was unilateral. All the same the frequency of palatal paralyses was of no value as an argument in favour of the peripheral paralyses theory, because it was just as commonly present after cases of oral and of laryngeal diphtheria.

ARNHEIM had only seen the changes in the peripheral nerves.

KATZ, in reply, maintained the exclusively central origin of diphtheritic paralysis, and insisted on the pathological character of the changes in the ganglia and nerves in his specimens.

*Arthur J. Hutchison.*

### GLASGOW MEDICO-CHIRURGICAL SOCIETY.

19th February, 1897. ("Glasgow Med. Journ.," May, 1897.)

WALKER DOWNIE read a paper on the *Use of Antitoxin in the Treatment of Diphtheria*, urging its more general and early use.

With regard to the use of serum, the chief points referred to were : (1st) the serum must be fresh ; (2nd) valuable time should not be lost by waiting for a bacteriological diagnosis—if the clinical diagnosis is "diphtheria," antitoxin should be used at once ; (3rd) the first injection in an average case should contain not less than five hundred units of immunization, while double that dose may be given in severe cases ; (4th) unless decided improvement is manifest in twenty-four hours, the injection should be repeated, and may, if necessary, be again repeated after the lapse of forty-eight hours from time of first injection.

Dr. D. had had eight cases to which he had been called with the express purpose of opening the trachea, but in which he had given antitoxin instead. "Each of these eight cases recovered without operation." He had also had cases which, after he had performed tracheotomy or intubation, and had used antitoxin, had died ; but in them the disease had existed for some time, and toxæmia was advanced.

WALKER DOWNIE showed *Tonsils from a Case of so-called Mycosis Tonsillaris Benigna*—really a case of what Siebenmann calls hyperkeratosis lacunaris. He had seen five other similar cases.

*Arthur J. Hutchison.*

### CONGRESS OF WEST GERMAN LARYNGOLOGISTS AND OTOLOGISTS.

(Specially reported for JOURN. L., R., AND O. by DR. LIEVEN, Aix-la-Chapelle.)

In January of this year a meeting of some of the laryngologists of Rheinland and Westphalia was held, at which Hopmann, of Cologne, read a paper on ozæna, and Löwenstein, of Elberfeld, showed a case of prolapse of the sinus of Morgagni. Thereafter, by invitation of the existing committee, a well-attended meeting was held in Cologne, for the purpose of starting a new association. This new association is to be called "Vereinigung Westdeutscher Hals- und Ohrenärzte" ; is to meet twice a year in Cologne, or some other town of Rheinland or Westphalia.

Hopmann (Cologne) was chosen President ; Keller (Cologne), Vice-President ; Reinhard (Duisberg), Treasurer ; and Moses (Cologne),

Secretary. There are already thirty-seven members of the Association. The next meeting will be held on Sunday, 7th November, at 4 p.m., in the "Fränkischer Hof," Cologne.

LIEVEN (Aix-la-Chapelle). *Remarks on the Diagnosis and Therapeutics of Leukoplakia.*

The author first gave a short description of the objective clinical condition in leukoplakia, and pointed out that it had two favourite positions in the mouth, viz. : (1) the angles of the lips, whence it might spread to the mucous membrane of the cheeks ; (2) the anterior end of the tongue to right or left of the middle line. After shortly touching on the symptoms and course of the disease, Lieven dealt more fully with the etiology.

Leukoplakia developed generally out of a chronic catarrh of the mouth, which, in its turn, might be due to a variety of injurious conditions. Excessive smoking, the use of too highly spiced foods, and courses of mercury, had always been regarded as causes of the disease.

In contrast to such cases, there were others in which no local causes could be ascertained. In these one had to assume a special disposition on the part of the mucous membrane of the mouth to undergo the metamorphosis of leukoplakia in response to the slightest irritation. Syphilis was, undoubtedly, the chief predisposing condition. The author had himself diagnosed cases of leukoplakia as syphilitic, and had been able to cure them with mercury.

There was no difficulty in diagnosing leukoplakia from the acute mouth diseases—such as aphthæ, herpes, etc.—characterized by discoloration of the mucous membrane. The short course and the general symptoms of the latter sufficed to differentiate them at once. Again, it was not easy to confuse leukoplakia with typical syphilitic lesions of the mouth—erosions, papules, etc. Where the difficulty in diagnosis began was in regard to etiology ; and without a correct appreciation of the etiology there was but little chance of successful treatment.

The author next dealt with the method of examination to be adopted. He drew attention to one symptom of chronic catarrh of the oral mucous membrane that was of considerable value—this was swelling and hypertrophy of the interdental fold of mucous membrane and the formation of a horizontal ridge on the mucous surface of the lower lip. These were to be regarded as almost certainly due to mercurial inflammation ; so much so that, even in cases where syphilis was admitted, these conditions should suggest that the inflammation was due probably, not to the syphilis, but to the mercury used in treating the same. A careful consideration of the objective conditions, together with the history, would thus generally clear up the diagnosis and enable us to include or exclude syphilis.

Turning next to treatment, the author emphatically denounced the use of caustics in all cases due to chronic irritation. He corrected the dietetic errors of the patient, and had the mouth frequently washed out with a weak alkaline lotion. Painting with mel-boracis, as used by Butlin, was also to be recommended.

Caustic pastes and the like produced only temporary improvement, followed very shortly by relapse.

Deep, painful fissures on the edge of the tongue or on the hypertrophied parts of the mucous membrane were to be energetically dealt with by galvano-cautery. If syphilis was the probable cause, a three or four weeks' course of mercurial inunction generally produced completely satisfactory results.

LÖWENSTEIN (Elberfeld) remarked that there was leukoplakia quite apart from syphilis. He advised cauterizing with chromic acid.

LIEVEN replied that he was in agreement with a large number of distinguished colleagues in believing that chromic acid not only did no good, but actually was harmful.

KRONENBERG (Solingen) had seen a case in which the wearing of false teeth over carious roots had given rise to leukoplakia, which was cured by extracting the stumps.

HOPMANN agreed with some of the other speakers that any kind of irritation could produce leukoplakia, so that it was by no means always due to syphilis. It was often very difficult, sometimes impossible, to decide whether leukoplakia in a syphilitic patient was due to the syphilis or to the mercury. It appeared that, from the frequency of the bad results of mercurial treatment, this affection might be included amongst the "para-syphilitic conditions" of Fournier. Hopmann spoke strongly against cauterization with chromic acid. As a simple and mild form of treatment, he recommended the application of a solution of ferri-pyrine, followed by methyl-violet.

KRONENBERG (Solingen). *Demonstration of a Dermoid Cyst of the Floor of the Mouth, about the size of a Hen's Egg.*

These growths, somewhat rare in the floor of the mouth, are described by some (e.g., Moritz Schmidt) as atheromata. They generally arise from remains of the thyro-glossal duct, and are then congenital. They generally remain small till the age of puberty, but later may attain a very considerable size, so as to fill the whole oral cavity, and interfere with speaking, swallowing, and breathing.

The growth shown occurred in a girl of sixteen years, suffering from hypertrophy of the pharyngeal lymphatic ring. It was removed by shelling-out from the mouth. Healing occurred in about eight days.

Dermoid cysts ought always to be removed; and the method adopted by speaker was to be preferred to enucleation by external operation.

SCHNEIDER (Cologne) showed a *Galvano-Cautery Handle*.

LIEVEN (Aix-la-Chapelle) was asked to introduce a discussion on tonsillar tuberculosis at the next meeting. This he agreed to do.

*Arthur J. Hutchison (Trans.).*

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FIRST SPANISH CONGRESS OF OTOTOLOGY, RHINOLOGY,  
AND LARYNGOLOGY.

November 20th, 1896. (*Special Report by Dr. RUEDA.*)

(*Concluded from page 198.*)

President—Dr. VERDOS. Secretary—Dr. F. RUEDA.

COMPAIRED. *The New Treatment of Ozæna.*

The resemblance between the ozæna microbe studied by Belfanti and De la Vedova and the Klebs-Loeffler bacillus, together with the encouraging results obtained by Gradenigo, induced the author to make trial of the antitoxin treatment in cases of true ozæna. He arrives at the following conclusions :—

1. At the present time it is the most certain method of treatment.
2. The disappearance of the odour after the second or third injection of four to six cubic centimètres, as well as the diminution of the crusts and the increase of nasal mucus, justifies the preceding conclusion.
3. The mucosa becomes more rosy and swollen.
4. The fluidification of the crusts varies directly with the number of injections.
5. The dose of ten cubic centimètres suggested by Gradenigo is not free from danger.

SUNE Y MOLIST (Barcelona). *High Necrosis of the Temporal.*

The author gives the history of two cases of necrosis of the squamous portion of the temporal—a very rare condition in his opinion—secondary to long-standing middle ear suppuration. The necrotic area was very limited (a few millimètres), and was situated two centimètres above and in front of the external auditory meatus. The lesion had no connection with intracranial mischief, and both patients were cured after exposure of the dura mater. The author can give no definite explanation of the phenomenon.

CASTANEDA (San Sebastian). *Two Cases of Cerebral Disease of Otitic Origin.*

1. A child of seven, with chronic suppurative otitis on the left side. Fœtid discharge, perforation of the postero-inferior wall of the meatus, and denudation of the promontory. In consequence of aggravation of the disease there developed hemiparesis of the right upper extremity, with convulsive movements of the index and middle fingers, slight headache, and vertigo. No vomiting, delirium, or oscillation of temperature. Some days later paresis of the right leg. No hemianopsia, preservation of pupil reflexes, venous congestion of the optic discs. Dr. Castaneda performed the Stacke-Schwarze operation, and found the mastoid cavities very small and filled with pus, granulations in the attic, as well as fœtid pus and small sequestra. There was no visible communication with the cranial cavity.

He removed the roof of the tympanum, and found the dura mater

normal. In spite of many explorations with a sterilized canula, no pus was found in any direction. The author remarks on the probable localization of the purulent centre, which he places in the ascending parietal convolution and the middle portion of the fissure of Rolando. He is of opinion that operation should always be performed if there are symptoms of abscess, though the latter cannot be localized. The absence of direct communication suggests the lymphatics as the path of infection. He thinks that a canula of large size should always be employed for exploration in order to avoid the possibility of blocking.

2. An adult patient, suffering with acute middle ear catarrh, was on the third day attacked with very obvious symptoms of acute meningitis. Paracentesis gave vent to sero-sanguinous fluid. Within forty-eight hours the patient died in a condition of coma, and without presenting symptoms to raise a suspicion of uræmia. The author concludes :—

1. Catarrhal disease of the middle ear can produce meningitis.

2. Bacteriological investigations have proved the identity of the microbes of catarrhal and suppurative otitis.

RUEDA. *Inflammation of the Ethmoid and the Middle Turbinate.*

The difficulty of diagnosing ethmoidal affections, as well as the absence of a classification founded on minute pathological anatomy, in spite of investigations on all sides, marks this question as one still requiring an answer.

The personal observations of the author, supported by those of others—notably English and American—compel him to look upon the middle turbinate as an organ important to study in its smallest details for the elucidation of some cases of uncertain diagnosis, as he sees in it a striking resemblance to what occurs in the mastoid apophysis in relation to the diseases of the tympanum and attic.

The author made a careful study of two cases of ethmoidal disease, in which it was easy to make out a fistulous track, with its opening at the centre of the middle turbinate, through which a probe could be passed up into the ethmoidal cells. The first case was that of a man of forty, in whom pus discharged through the fistula. The second case was that of a child of ten, exhibiting necrosis of the ethmoidal cells and destruction of the os planum, with deep-seated phlegmon of the orbit and marked proptosis. A fistulous opening was present in the middle turbinate, through which, after dilatation, two very fetid caseous masses were removed. The establishment of orbito-nasal drainage determined a cure. This existence of a fistulous track has not, the author believes, hitherto appeared in the literature of the subject, and should be added to the phenomena of acquired ethmoidal suppuration.

The presence of a middle turbinate, enlarged, smooth, bright red, and, as it were, inflated, should incline us to give a diagnosis of ethmoidal disease in doubtful cases.

#### SECTION OF LARYNGOLOGY.

BARBERA (Valencia). *Vocal Treatment of Unilateral Paralyses.*

In a case of aortic aneurism, with paralysis of the recurrent, the

author has observed the gradual re-establishment of movement in the paralyzed cord through the employment of systematic vocal exercises.

PIMILLA (Madrid). *Reflex Disturbances of the Nose, Throat, and Ears in Childhood.*

The histological differences which exist between the nervous system of the child and that of the adult explain the difference in the symptoms and the preponderance of reflexes in the former.

The presence of an undescribed laryngeal centre in the brain is sufficient explanation of the production of laryngeal spasm and stridulism. The theory of Cajal with regard to the function of the neuroglia as an isolator of nerve currents throws light on the frequency of reflex in childhood.

Aural, laryngeal, and pharyngeal reflexes are caused by rickets.

Tonsillar hypertrophy often enough disappears as a child grows up, and may yield to general treatment if no functional complications of importance or reflexes are present which necessitate surgical interference.

Aural, nasal, laryngeal, and pharyngeal reflexes are often prodromal symptoms of rickets.

Thoracic deformity in cases of nasal obstruction are oftener due to rickets than to an indirect or reflex influence.

URUNUELA (Madrid). *The Simplification of Tracheotomy.*

In every case of tracheotomy all that is required is a bistoury and a canula. It is an operation almost devoid of danger, and should be performed in the consulting room.

*Rueda (Waggett, Trans.).*

## ABSTRACTS.

### DIPHTHERIA, &C.

Békésy.—*Results of Diphtheria Treatment by Heilserum in Hungary.* "Wien. Klin. Rundschau," 1897, Nos. 16 and 17.

REPORT on nine thousand injections. Of all treated patients, 19·1 per cent. died. Before the treatment by serum the mortality of diphtheria is said to have been from forty to forty-three per cent. The mortality was—

|                                    |                |
|------------------------------------|----------------|
| In diphtheria of the pharynx ..... | 13·4 per cent. |
| In diphtheria of the larynx.....   | 38·7 per cent. |
| Mixed form .....                   | 42·1 per cent. |
| Undecided .....                    | 11·6 per cent. |

Tracheotomy or intubation was performed in three hundred and seventy-two cases. One hundred and ninety cured; one hundred and eighty-two died (*i.e.*, a mortality of 48·9 per cent.). The author concludes that he does not think the heilserum will give such a very great improvement in the treatment of diphtheria as many people think. All known and tried remedies of hygiene ought to be used to treat diphtheria.

*R. Sachs.*

## MOUTH, &amp;C.

**Dixon, F. A.**—*Further Note on the Course of the Taste Fibres.* "Edinburgh Med. Journ.," June, 1897.

WHEN he wrote his article "On the Course of the Taste Fibres" in the April number of the "Edinburgh Medical Journal" (see JOURNAL OF LARYNGOLOGY), the author had not read Prof. Krause's work, "Die Neuralgie des Trigemini." After discussing the difficulties presented by some of the cases, he concludes:—"Prof. Krause's observations are compatible with the theory that the seventh and ninth nerves are the nerves of taste, and with no other at present put forward. "Since this is so, the theory that these are the true paths for taste impulses is "supported by anatomical, embryological, and experimental evidence."

*Arthur J. Hutchison.*

## NOSE AND NASO-PHARYNX, &amp;C.

**Folkes, H. M.**—*Worms in the Nostrils.* "Med. Record," May 8, 1897.

THE patient was a male negro of deficient mental capacity, who came complaining of nose-bleeding and pains in the head. The right side of the head was much swollen, and in the nostril of that side a mass of "screw worms as large as a pecan" was seen. Forty-one were removed and the nostril irrigated with thymol solution. As there were obviously worms in the antrum, operation was considered, but an alcoholic solution of chloroform was first tried. Next morning the swelling was much gone down, and twenty-two more had been expelled. Eventually in five days one hundred and thirty-one worms were removed, none less than ten millimètres long, and the boy was cured.

*R. Lake.*

**Heubner.**—*Meningo-coccus Intracellularis in Pus from the Spine and in the Nasal Secretion of a Case of Epidemic Cerebro-Spinal Meningitis.* Verein für Innere Med., March 1, 1897. "Deutsche Med. Woch.," April 29, 1897.

LAST year in the same society Heubner reported nine cases, Von Leyden three, A. Fraenkel one, and Fürbringer five of epidemic cerebro-spinal meningitis, in all of which bacteriological investigation revealed the presence of the intracellular diplococcus. On February 15th of this year a young man was received into the first medical clinic suffering from the typical signs of meningitis. Lumbar puncture was performed, and forty cubic centimètres of thin, purulent fluid flowed out; this contained in large quantities the typical intracellular meningo-coccus.

After touching on some other interesting points in the case, Heubner continued: Even during life this typical diplococcus was to be found in quantities in the nasal secretion, where this was purely purulent. (Control examinations of the nasal secretion from patients in the next beds revealed no such coccus.)

Jaeger and Scherer were the first to discover the diplococcus in the nasal secretion and on pocket handkerchiefs of meningitis patients (even after six weeks), and

Heubner had reported a positive result in nasal secretion. This discovery of the presence of meningo-cocci in the nasal secretion indicated the most probable mode of infection, and suggested at least one very important prophylactic precaution—viz., immediate disinfection of handkerchiefs. *Arthur J. Hutchison.*

**Kronenberg, E.**—*Nasal Polypi and Nasal Suppurations.* “Therap. Monats.,” May and June, 1897.

THE relations existing between nasal mucous polypi and suppurations of accessory cavities, turbinal bodies, or meatus is one which has arisen only comparatively recently, and which is still unsettled. Reports of cases are wanted. Each rhinologist ought to publish a report, not on a few selected cases, but on all cases of nasal mucous polypi and suppurations that have occurred in his practice. In this paper only polypi proper (the fibroma oedematosum of Hopmann) are considered; polypoid degeneration of turbinals, papillary hypertrophy of the inferior turbinal, and small red granulations being left out of account.

In Grünwald's eighty-two cases of polypus formation local suppurations were found seventy-one times. His statistics have been severely criticized. The author bases his report on forty-five cases (his total number was fifty-one, but six are omitted on account of insufficient observation), and tabulates these so as to show name, age, etc., whether bilateral or unilateral abnormal secretions. Were accessory sinuses diseased, and which? Was there present any other bone disease or suppuration in the nose? and remarks. In six (thirteen per cent.) there was no abnormal secretion, whilst in thirty-nine (eighty-seven per cent.) it was present, almost the same proportions as Grünwald found, viz., fourteen per cent. and eighty-six per cent. respectively. In twenty-seven (sixty per cent.) the secretion came from an accessory cavity, in eleven (fourteen per cent.) from a meatal suppuration, which is very near Grünwald's twelve per cent. In one case the pus apparently came from adenoids in the naso-pharynx.

There are three possible explanations of the close relations between suppuration and polypi: first, suppuration is primary—polypi result therefrom; second, the same cause produces both; third, polypi are primary and cause suppuration.

There are many reasons for believing that the suppuration is very often primary, and followed by the growth of polypi; on the other hand, it is possible that chronic catarrh, causing hypertrophy of parts of the mucous membrane, leading to retention of secretion, gives rise to polypi, and that they, by causing still greater retention of secretion, finally lead to meatal suppurations. Meatal suppurations in their turn may very readily give rise to suppurations in the ethmoid labyrinth, and so on. In any case polypi can no longer be regarded as simple, innocent growths, whose treatment is ended with their removal; their presence indicates the presence (in the majority of cases) of disease of bone or accessory cavities, and their treatment involves the treatment of these. *Arthur J. Hutchison.*

**Kuh, E. J.**—*Primary Cancer of the Naso-Pharynx cured by Injections of Alcohol.* “Med. Record,” N.Y., April 17, 1897.

THE patient was a man of thirty-seven, complaining chiefly of epistaxis, nasal obstruction, and crust formation, which had increased somewhat rapidly during the previous six months. There was a large mass in the naso-pharynx, which was removed and thought to be hypertrophied pharyngeal tonsil. Within one week the naso-pharynx was filled with a soft, bleeding growth. Microscopical examination of the tissue removed proved it to be cancer. Realizing the futility of operative measures, injections of alcohol, after the method of Schwalbe and Halse, were

undertaken, beginning with three minims, and increasing to thirty minims (injections of Coley's fluid having failed). Twelve injections sufficed to obliterate all trace of the growth, and the patient only was troubled with crust formation in the naso-pharynx. A *résumé* of the literature is given. R. Lake.

**Lange, V.**—*On the Use of Chloroform in operating on Adenoids.* "Therap. Monatsch.," June, 1897.

A DECIDED advance was made in the technique of the operation on adenoids a few years ago by the introduction of Gottstein's ring-knife, which is, undoubtedly, the best instrument yet invented for this purpose. It is now agreed that the object of the operation is to remove the whole of the hypertrophied mass in one sitting, but opinions still differ as to whether this should be done with or without narcosis.

In 1883, during a discussion of this question, Hopmann (Cologne) stated that for some years he had operated one-third of his cases in narcosis, and at one sitting; and pointed out that that method was of special value where tonsillotomy was required as well. Arthur Hartmann was the only speaker who sided with Hopmann. In 1895 Hopmann, and in 1897 Thost, published papers on this question. The former had operated on 1106 patients, with one death (certainly due to bad chloroform); the latter, 1500 patients, with no deaths. The author, at one time an opponent of the use of narcosis, is now strongly in favour of it—not, indeed, in every case, but in a large number, and the narcotic he prefers is chloroform. The patient lies almost horizontal; chloroform is given till an O'Dwyer's gag can be introduced into the mouth without resistance; the operation is done with Gottstein's curette, and as soon as it is complete the gag is removed, and the patient's head turned to one side. Syringing the nose, insufflation of powders, etc., are not used either before or after the operation. The author does not follow out Thost's routine practice of making a thorough examination of the internal organs before the operation, and having electric battery, ether, ice-water, and tracheotomy instruments ready during the operation. After the operation the child is kept a day or two in its room, and from school for a week, but may eat and drink as usual; an adult avoids alcohol.

The advantages of operating with chloroform are: first, that one gets peace and quietness to do what has to be done; second, that there is far less shock to and struggling on the part of the child. With patients who can sit quietly no narcosis is necessary. The disadvantages of operating with chloroform are the ordinary disadvantages attending any chloroform operation. That the use of chloroform in this operation is dangerous the author denies. Aspiration of blood or pieces of the growth into larynx or trachea is unknown. Cyanosis may occur owing to the blocking of the nose, and the tendency of the tongue to fall back. Vomiting is to be expected some time after the operation. There is, in short, no more danger from chloroform in this than in any other operation. Of other narcotics the author has but little experience, and has no desire to try them, as he has every reason to be perfectly satisfied with chloroform.

*Arthur J. Hutchison.*

**Luc.**—*Acute Suppurative Traumatic Meningitis checked by Early Opening of the Cranium and Antiseptic Douching of the Pia Mater.* "Arch. Internat. de Lar., Otol., et Rhin.," March and April, 1897.

THE author relates in full the details of this case, which has been previously noted in this journal. The patient, a woman of thirty-three, was operated on for swelling of the right frontal sinus, which proved to be due to the presence of spindle-celled sarcoma, not involving the bone, and accompanied by a slight degree of suppura-

tion. The wound was closed by the method usually employed by the author, a drain tube being placed in the fronto-nasal canal. Nineteen days after operation the wound opened spontaneously and gave issue to pus. Ten days later a portion of the orbital wall was resected to admit of removal of a portion of growth which projected into the orbit. Five weeks after the first operation fever, headache, and loss of appetite commenced, and somnolence, slowing of pulse, and paresis of the limbs on the left side quickly followed. Coma supervened, and the cranial cavity had to be opened by removal of the posterior wall of the right frontal sinus. The dura mater was healthy, but on laying bare the pia mater a suppurating area, not exceeding a square centimètre in extent, was discovered. This was treated antiseptically, and three punctures of the frontal lobe giving vent to no pus the wound was dressed with iodoform gauze, placed between the skin flaps and the hernia cerebri. Consciousness returned, fever subsided, and paresis of the limbs disappeared. Convalescence was interrupted by an attack of basal pneumonia. No examination was made of the meningitic pus.

Two months after the cerebral operation an exploratory puncture of the hernia cerebri revealed the presence of an abscess of the frontal lobe, and shortly afterwards a second was discovered. The author thinks these may be the result of ineffectual disinfection of the pia mater before his original exploratory punctures. The further history of the case has been quite satisfactory.

The author lays stress (1) on the small extent of suppurative lepto-meningitis capable of causing marked cerebral symptoms, and (2) on the radical cure of meningitis by early operation.

*Ernest Waggett.*

**McBride, P., and Turner, L.**—*Naso-Pharyngeal Adenoids: a Clinical and Pathological Study.* "Edinburgh Med. Journ.," April, May, and June, 1897.

THIS paper is founded on the study of five hundred private and one hundred hospital cases. As it is impossible to do justice to a paper of such length and fulness in a brief abstract, all that can be attempted here is to indicate some of the conclusions arrived at by the authors.

*Etiology.*—In a large number of cases the occurrence of symptoms of adenoids may be traced back to some antecedent acute illness. This, however, does not exclude the possibility that the adenoids may have been more or less present before the acute illness.

Under five years of age they are fairly common, also between fifteen and twenty. They are most common between six and fifteen, and are rarely well marked over twenty, though their remains are not at all infrequent after that age. Sex apparently has no influence, but heredity probably has a very considerable influence on the occurrence of adenoids. Whether climate has much effect on the production of adenoids may be doubtful, but a damp atmosphere favours the occurrence of symptoms, while opposite conditions tend to diminish the nasal obstruction. No original observation with regard to the relation of adenoids and deaf-mutism is recorded. The five hundred cases of adenoids occurred in a total of four thousand five hundred patients suffering from some form of throat, nose, or ear disease. "It is not pretended that absolutely every patient of that total number 'had his or her posterior nares examined,' but this was done in a great majority of instances.

*Pathological Anatomy.*—Pedunculated growths have been reported by other observers (Schäffer), but "we have little or no experience of such growths, and 'anything but the sessile-ridged form must be looked upon in Scotland as a very 'great rarity,' as also adenoids growing from the margins of the choanæ or from the Eustachian tubes; on the other hand, they may be found in Rosenmüller's fossa.

The epithelium covering hypertrophied pharyngeal tonsils may undergo thickening or thinning, become squamous, and lose its ciliated character. Thickening of the epithelium occurred most frequently in young cases under ten years, only in one patient over fifteen years, and was most marked in two patients of four years. It is, therefore, presumably due, not to the age of the growth, but to intermittent pressure in small naso-pharynges. The opposite seems to occur where the pressure is continuous or where there is distension (*e.g.*, in crypts).

The normal emigration of leucocytes is either greatly diminished or completely stopped in the hypertrophied condition.

The proportion of the fibrous connective-tissue element to the cellular element varies considerably in different cases. In many cases there is a tendency to an increase in the fibrous—this is a perivascular process—at the expense of the cellular element, leading to eventual shrinking of the growth. It is quite a mistaken idea, however, that this tends to come on at any given age—*e.g.*, about puberty—indeed, it appears to be more common in the very young child than in the adult.

The important question whether adenoids may be one of the ways of entrance into the system for tuberculosis was studied. Specimens from one hundred patients being examined for evidence of tubercle, three per cent. were found tuberculous—*i.e.*, “giant cells, with their marginal zone of nuclei, surrounded by endothelioid cells and areas of degeneration,” were present; but in no case could either tubercle bacilli or caseation be detected. The results obtained by other observers give a higher percentage of tubercular adenoids, *viz.* :—Pilliet, 7.5 per cent.; Dieulafoy (by histological examination), 5.7 per cent.—“by inoculation experiments,” twenty per cent.; Brindel, 12.5 per cent.; G. Gottstein, twelve per cent.; Pluder and Fischer, 15.6 per cent. The authors consider that, for various reasons, their own results are really far too low, and that probably Dieulafoy’s twenty per cent. is nearer the truth.

*Semeiology.*—The authors are doubtful whether defects of speech, other than those directly due to the nasal obstruction, can be attributed to the presence of adenoids, though they cite one case in which very defective speech began to improve immediately after the operation. They have no record of chorea cured by removal of adenoids, but note that sometimes bilious attacks and fœtor of breath may be cured in this way.

Deafness, more or less marked, occurred in three hundred and four out of five hundred cases, the most common cause being Eustachian obstruction. Otitis media purulenta (past or present) was found in ninety-eight; sclerosis in eight; while earache was a prominent symptom in twenty-five cases.

*Diagnosis.*—A normal condition of the faucial tonsils is not uncommon in cases of adenoids. Thus, in four hundred and twenty-seven adenoid cases the faucial tonsils were noted as enlarged only one hundred and twenty-six times—*i.e.*, 29.6 per cent.

*Prognosis.*—As regards the removal of nasal obstruction, the prognosis is excellent, but this does not always imply that speech will become normal. Recurrence occurs seldom, and in the authors’ opinion more seldom when the operation is done under chloroform than when done without a narcotic.

Only one case of death immediately following the operation is recorded, and in it the child probably had been infected with scarlet fever just before undergoing the operation. He died on the fourth morning. Otitis media, as a consequence of the operation, is rare, if no nasal injections are used. As to the effect on previously enlarged cervical glands, this has varied greatly. In some cases the glands have rapidly diminished and disappeared, in others they have remained apparently unaffected. Deafness, which is due to retracted membranes and is

benefited by inflation, will be certainly improved by removal of the adenoids ; but no good is to be expected in cases of deafness due to sclerosis. In suppurative cases (otorrhœa) adenoids should be removed.

*Operation.*—The authors have found chloroform the most satisfactory anæsthetic, but have been disappointed with bromide of ethyl. The instruments used are Delstanche's modification of Gottstein's curette, Hartmann's lateral curette, and the finger nail if necessary. If the naso-pharynx is very large, Kuhn's forceps may be used first. Adenoids and tonsils may be removed at the one operation, and it is generally better to remove the adenoids first and the tonsils after. As complications of the operation there are noted :—1st. Contracting some contagious disease. 2nd. Tags of tissue loosened but not detached. 3rd. Stiff neck. 4th. Ear complications.

Arthur J. Hutchison.

**Molinié** (Marseilles).—*Three Cases of Ozæna cured by Hypodermic Injection of Roux's Serum.* "Ann. des Mal. de l'Oreille," etc., April, 1897.

THE author reports three very striking instances of what are, at all events, temporary cures resulting from the exclusive use of antitoxin injections :—

**Case 1.** A woman of twenty years of age, who had suffered for four years with a very offensive ozæna in spite of careful treatment with douches, etc. Deafness and tinnitus were present. There was marked atrophy of the turbinates, the Eustachian orifices being easily seen through greatly enlarged nasal fossæ. The latter and the naso-pharynx were covered with crusts. The first injection of ten cubic centimètres was given on November 10th, and all douching was stopped. After two injections no local improvement—slight general disturbance ; after the third the crusts were expelled spontaneously ; after the fourth the crusts expelled were less voluminous ; after the sixth (on November 23rd) the secretion, profoundly modified, had become absolutely serous. Hearing was sensibly ameliorated. The nasal fossæ were perfectly clean, and not the least odour was to be detected ; the mucosa was rosy and moist. After the eleventh injection (December 7th) the nasal secretion was abundant. Seventeen doses, in all, were given ; the last on December 24th. Eight days later the nose appeared perfectly normal and the turbinates of the usual dimensions. A semi-fluid secretion was present, quite free from odour. The improvement in hearing was marked. On March 30th the cure was still maintained, though no irrigation had been practised.

**Case 2.** That of a girl of thirteen, suffering for three years with typical atrophic rhinitis and deafness. After the sixth injection of ten cubic centimètres the improvement was marked. Three months after the last dose a limpid fluid was secreted free from odour. "Examination of the nasal fossæ did not permit of the suspicion " of a previous ozæna." Hearing much improved.

**Case 3.** A girl of eighteen, with ozæna of three years' standing and very patent nasal fossæ. After ten injections of ten cubic centimètres there were no crusts, but a little mucus quite free from odour. A dose of fifteen cubic centimètres was then given. This was followed by severe general disturbance—fever, delirium, articular pains, œdema of extremities, and scarlatiniform erythema. After four days these had passed off. After three months, during which no douching had been employed, the nasal resecretion remained completely modified and quite free from odour.

Ernest Waggett.

**Reichert** (Berlin).—*Chronic Inflammation of the Ethmoidal Sinus and its Relation to Empyema of the Ethmoidal Cells and of the Antrum of Highmore.* "Wien. Klin. Rundschau," 1897, Nos. 18 and 19.

FIRST the author gives a historical review ; then he reports on thirty cases of his

own. Like Woakes, he means that the etiology of polypi of the nose results from disease of the ethmoidal bone.

R. Sachs.

**Sänger, M.**—*On the Treatment of Acute Nasal Catarrh.* "Therapeut. Monats.," May, 1897.

VARIOUS means may be employed to remove the blocking of the nose and to diminish the hypersecretion, which are the two most troublesome symptoms of this affection.

1. *Vapours.*—Ol. terebinth or a two to five per cent. alcoholic solution of menthol are the best. The action of the latter is the more prompt, but that of the former lasts longer. These are to be blown, not drawn, into the nose.

2. *Powders.*—These also are to be blown and not snuffed into the nose. The best are—

|                   |     |
|-------------------|-----|
| Camphoræ.         |     |
| Acid tannic ..... | 2'0 |
| Sacch. lact.....  | 4'0 |

Or—

|                   |     |
|-------------------|-----|
| Cocain. mur. .... | 0'2 |
| Menthol .....     | 0'1 |
| Sacch. lact.....  | 3'0 |

3. *Fluids.*—Douches and syringes are to be avoided. Sprays or nasal baths are much safer and as effective. A mixture of equal parts of peroxide of hydrogen and water is very effective when used as a spray. Cocaine is not to be trusted in the hands of the patient, but a two per cent. oily solution of menthol may be used instead.

Inhalation of steam, the use of compressed air, diaphoretics, and quinine, salicylic acid, antipyrin, and specially salipyrin, are highly recommended.

Arthur J. Hutchison.

**Spieß, G.** (Frankfort-on-Maine).—*A New Method of Treating Suppurations in the Accessory Cavities of the Nose.* "Archiv für Laryngologie und Rhinologie," Band V.

THE principle of this method, which the author terms "the electro-chemical," is as follows:—If the wall of a vessel containing five per cent. solution of salt is connected with the negative pole of a constant current, while the positive terminates in a copper wire immersed in the fluid, electrolytic action will take place, followed by a deposition of chloride of copper on the wall of the vessel. The effects are threefold—viz., the bactericidal action of the poles, especially the positive; the chemical properties of the newly-formed chloride of copper; and the cataphoresis induced by the passage of the stream from anode to kathode.

In practice the following arrangement is employed:—The end of a vulcanite tube is introduced into the antrum through the artificial opening. This is connected with a vessel containing salt solution by means of an enema syringe, so that the cavity can be filled when the head is inclined towards the affected side, the cheek being directed forwards and downwards, thus bringing the natural opening into the highest situation possible. A copper wire, connected with one pole, runs in the centre of the vulcanite tube, surrounded by the salt solution. The other pole is applied to the shoulder or breast.

In treating the frontal sinus the tube is introduced through the natural opening—which may be enlarged when necessary—and the patient sits with his head bent strongly forward, so that the outer wall of the sinus rests on a pad connected with the negative pole.

The current is gradually increased from ten to fifteen milliamperes. The sit-

tings last ten minutes, and are repeated once or twice each fortnight. In the intervals the usual daily washing is carried out. The results obtained by the author so far have been favourable.

A. B. Kelly.

**Tilley, Herbert.**—*Some Diseases of the Antrum and their Treatment.* "The Clin. Journ.," April 14, 1897.

INTRANASAL disease accounts for more cases of antral suppuration than does dental disease. As frontal sinus disease is rare and most difficult to diagnose, always treat a suspected case as one of antral suppuration until you have proved it otherwise. To tell if the antrum contains pus, explore by means of Lichtwitz's trocar. Transillumination is "a pretty but expensive aid to diagnosis," and is open to many objections. As to treatment, if there is a carious tooth, open through alveolus; if not, make perforation in the canine fossa. Whichever of these you adopt, give it at least six months' trial before you try anything else, and even then hesitate, unless the patient is intolerant of a slight discharge and the worry of syringing. If something more must be done, enlarge alveolar opening with gouge or burr, curette the antrum, and pack with iodoform gauze. As a last resort, when the patient insists on "anything for a cure," you may make a large opening in the canine fossa, and a counter-opening in the inferior meatus; then curette and pack as before. The objections to the last method are—that it sometimes causes facial oedema and pain for many hours or even days; that it may leave a sunken cheek; that the aperture is difficult to keep open; and that the result is not always a success by any means.

Middlemass Hunt.

## LARYNX.

**Kitchen, J. W. M.**—*The Epiglottis a Pin Cushion.* "Med. Record," N.Y., April, 1897.

A COLOURED GIRL complained of having a pin in her throat, which was seen with its point embedded in the epiglottis and lying head downwards. No forceps could be made to grasp it, but a snare was passed round it, and by the aid of the finger it was removed.

R. Lake.

**Kuttner, A.** (Berlin).—*Chorditis Vocalis Inferior Hypertrophica.* "Archiv für Laryngologie," Band V.

THE nature of this disease has remained, to a great extent, unexplained, owing to its rarity and the difficulty of keeping the patient under observation for years, and ultimately obtaining a *post-mortem* examination. The author has investigated the case described below.

A servant, aged twenty-eight, was brought to the hospital on account of great difficulty in breathing. She had had no previous throat trouble with the exception of occasional temporary hoarseness. Eight weeks before admission slight hoarseness had again set in, which did not pass off, however, under the usual home treatment. On the day preceding admission she contracted severe cold in the head and the hoarseness suddenly became very marked, and for the first time slight dyspnoea was experienced. Her condition rapidly became worse. When examined in the hospital her lips and cheeks were cyanotic, and the breathing was laboured and accompanied by stridor. The mucous membrane of the nose was red and swollen, that of the pharynx and entrance to the larynx normal. The lips of the vocal cords were freely movable and pale red. Two thick red

swellings appeared immediately beneath their free edges, and in direct continuity with them. On inspiration, these swellings came so closely together as almost to completely occlude the subglottic lumen. Sputum and urine were normal. No signs of tuberculosis or syphilis. Ice—internally and externally—quickly diminished the dyspnoea. Two days later, however, it suddenly became very severe, demanding immediate tracheotomy. After several days had elapsed, efforts were made to dilate the stenosis, but without success. The breathing and voice slowly improved, although the subglottic swellings diminished but slightly. Mercury and iodide of potassium produced no effect. Two months after the tracheotomy, laryngotomy was performed, and large wedge-shaped pieces were excised from the subglottic region. The operation was only temporarily successful, the condition three months later being very much as before. The patient then contracted pneumonia, which left her with a troublesome cough and profuse purulent expectoration. This, in the course of the next four weeks, without any rise of temperature, greatly reduced her strength; she then died with symptoms of cardiac failure.

At the *post-mortem* examination the pharynx and entrance to the larynx were found normal. Beneath the sinuses of Morgagni there was marked narrowing of the lumen of the larynx. A dense indurated mass, in which the edges of both vocal cords were imbedded, projected into the larynx. A cicatricial cord at the lower end of the thickening just described ran almost horizontally to the anterior wall of the larynx. Beneath this lay succulent greyish-red granulations and small cicatricial strands. The lumen gradually increased from the lower end of the cricoid cartilage downwards, and was normal at the beginning of the trachea.

The microscopic examination of the subglottic parts showed considerable increase of the mucous and submucous connective tissue extending deeply into the muscular layer. Amongst the newly found tissue, especially near the vessels and glands and beneath the epithelium, were small-celled infiltrations. At some points processes from the epithelial lining sank into the submucous connective tissue. These changes extended upwards to the true cords, and even the floors of the ventricles of Morgagni presented distinct evidences of active inflammation. In passing downwards, normal conditions were again met with at the beginning of the trachea. No indication of tuberculosis, scleroma, or other infective disease was observed.

Under the name of *chorditis vocalis inferior hypertrophica* a number of cases have been classed, which, apart from a temporary similarity in their clinical appearance, have nothing to do with one another. Some of these have been due to syphilis or tuberculosis, others to scleroma. Only by advances in pathological anatomy and bacteriology has a genuine form of *chorditis vocalis inferior hypertrophica* been isolated, corresponding to the condition described by Gerhardt.

Störk considers that the subglottic proliferations are always due to tuberculosis. Sokolowski and the author oppose this view. The origin of the affection is still a matter of dispute. A special bacillus has been sought in vain. Sokolowski thinks that hereditary syphilis may play a part in the causation; the author is of opinion, however, that this view has not sufficient clinical support. He mentions that the following features have been noted in almost all cases:—Onset marked by one or several attacks of hoarseness, generally attributed to catching cold; the hoarseness usually persisting a considerable time, and not passing off entirely.

The distinctive features of this disease, however, are its extraordinary clinical symptoms, localization, and rarity. In the course of an apparently harmless hoarseness, attacks of extreme dyspnoea set in, although there is no oedema at the entrance of the larynx. This is not so astonishing, however, when it is remembered that the disease is not of quite recent date. If subglottic thickenings are present, slight swelling would suffice to produce complete stenosis. This would occur

more readily in the subglottic region than at the glottis itself, for in the former the elastic network is absent, which, in the edges of the cords, forms a firm wall preventing broadening by inflammatory swelling.

This disease in its very pronounced form, as described by Gerhardt, is certainly rare, but in the less advanced stages it is by no means uncommon. To prove this we have only to examine larynges from persons who have suffered from chronic laryngitis and observe how frequently the subglottic tissue is thickened, presenting microscopically an undoubted increase of connective tissue.

The author, therefore, concludes that there is a genuine form of chorditis vocalis inferior hypertrophica which is independent of syphilis, tuberculosis, scleroma, and nasal disease. It results from one or more attacks of subacute laryngitis. The anatomical change consists in an increase of the mucous and submucous connective tissue, which is formed chiefly, but not exclusively, in the subglottic region. The epithelial layer also in the affected area often presents considerable changes. Slight degrees of the disease produce insignificant or no symptoms; more severe forms occasionally lead by inflammatory swelling to sudden and complete stenosis of the larynx. The prognosis in these cases is unfavourable, for even the most active measures—laryngotomy, with subsequent destruction of the affected parts—scarcely ever succeed in restoring a normal condition.

A. B. Kelly.

**Lazarus** (Berlin).—*Abductor Paralysis in Gonorrhœa*. "Archiv für Laryngologie und Rhinologie," Band V.

A MAN, aged thirty-two, contracted gonorrhœa for the first time six weeks before coming under the author's observation. About ten days later he experienced pain successively in the right wrist, left elbow, both knees, and right ankle. After the pains had subsided, and the urethral discharge ceased, in consequence of treatment, pain on swallowing, cough, and difficulty in breathing set in. The dyspnoea rapidly increased, and four days after its onset, when a laryngeal examination was made, double abductor paralysis was found.

The following day (June 26) the patient came under the author's care. He was a well-built man; there was nothing in his family or past history of any importance. When first seen by the author he was scarcely able to move on account of the dyspnoea. He sat up in bed, the eyeballs being prominent and sclerotics injected. The nose, ears, lips, and extremities were purple and cold. The pupils reacted equally to light and accommodation. All the accessory muscles of respiration were called into play. Inspiration and expiration were accompanied by loud stridor. The voice was rough and hoarse. Owing to the shortness of breath he had to pause after every few words spoken. Respirations 32 to 36 in the minute. Constant, short, barking cough.

The pharynx and epiglottis were normal. The laryngeal mucous membrane was red; the false cords arched inwards and swollen, so that only a narrow strip of the vocal cords was visible. The arytenoid and interarytenoid region presented nothing abnormal. The vocal cords were adducted; the left, tensely stretched, occupied the middle line, while the right, running in a straight line, deviated slightly posteriorly, so that the glottis formed a very narrow right-angled cleft. No movement of the intralaryngeal parts could be detected with certainty during either respiration or phonation. Pressure on the laryngeal cartilage caused no pain. No indurated glands were found in the neck, cubital or inguinal regions.

Lungs and heart normal. Temperature 38.3. Pulse, small, regular, 136 in the minute. Marked retraction in the epigastrium with inspiration. Tendon reflexes normal. Urine normal in amount and contained neither sugar nor albumen; it gave, however, a distinct iodine reaction, and contained gonorrhœal threads. The skin presented no eruption or œdema. The sputum contained neither tubercle

bacilli nor gonococci; nor were the latter found in the mucus brushed from the larynx.

Morphia subcutaneously, ice bag to the neck, and bicarbonate of soda were prescribed.

Two days later (June 28th) the dyspnoea had increased considerably and the patient was occasionally slightly delirious. Painting the larynx with a twenty per cent. solution of cocaine produced more benefit than the introduction of bougies, which could be tolerated for only a few minutes. Tracheotomy was performed only when the patient had become asphyxiated and pulseless, and artificial respiration was afterwards necessary.

June 30th.—Patient much better. The right vocal cord could now be abducted slightly. July 2nd.—Patient still improving. Redness, swelling, and tenderness suddenly set in at the base of the right index finger without elevation of temperature. The glottis now gradually enlarged, and on July 12th the canula was removed. On July 28th swelling and inflammation again set in, in the left external malleolus, and passed off within two days. The patient's general health had improved greatly, and only slight roughness of his speech remained, when on August 28th the following laryngeal condition was found:—True and false cords thickened and somewhat red. During phonation there is still unsymmetrical movement of the cords, excursions of the left being less than those of the right. Two months later the movement of both cords was quite normal.

By excluding *seriatim* all the known causes of abductor paralysis he shows that its association with gonorrhoea in the above case was more than a coincidence. He explains the origin of the paralysis as follows:—During the course of the disease the vocal cords were red, dry, and thickened; in consequence of this chronic laryngitis the altered peripheral ends of the inferior laryngeal nerves offered less resistance to the invasion of the gonococci, and a neuritis resulted which led to paralysis of the abductors.

The almost total absence of pain and of acute inflammation of the mucous membrane exclude the other two possible causes of the paralysis—viz., ankylosis of the crico-arytenoid joint and perichondritis.

*A. B. Kelly.*

**Schadewaldt, O. (Berlin).—On Laryngeal Vertigo (*Ictus Laryngis*). Sudden Death during an Attack.** "Archiv für Laryngologie und Rhinologie," Band V.

THE author has had seven cases of this affection under his care. The first is of special interest.

A gentleman consulted him in 1879 on account of hoarseness resulting from laryngitis. A cure was effected in two months. Fourteen years later the patient, now aged fifty-nine, returned, complaining of tickling in the larynx, troublesome cough, and difficulty in breathing on exertion. He appeared healthy, and the larynx was found normal. The cough was due to chronic bronchial catarrh. During violent paroxysms of coughing the face became bluish-red and the eyes prominent. Such attacks were especially frequent during meals.

The patient also mentioned that on several occasions he had become unconscious for a very short time, and had sometimes fallen during a fit of coughing. He had paid but little attention to the occurrence, however, as he felt quite well immediately afterwards. The author gives an account of an attack he witnessed. The patient had just finished supper and lit a cigar, the first whiff of which appeared to irritate the throat, for he coughed moderately, his face became bluish, and he immediately lost consciousness. The features were rigid but quite com-

posed, the eyes open and staring; he breathed quietly and maintained his seat without letting the head sink. After five seconds at the most he came to himself, and looked around smiling as if awaking from a refreshing sleep. He was quite himself immediately, and in a few minutes had forgotten the occurrence. Under climatic and dietetic treatment the cough was removed, and the attacks of laryngeal vertigo ceased for at least a year. Quite unexpectedly, however, he had an attack one evening similar to that above described. The following day, while conversing, the usual cough returned, he became unconscious, fell, and died in a moment.

There are only about fifty cases of laryngeal vertigo on record, the small number being probably due to the fact that persons suffering from this affection almost always seek medical advice solely on account of the subjective sensations in the upper air passages, and make no mention of the attacks of giddiness.

Laryngeal vertigo is merely a symptom. It is distinguished from fainting by occurring almost invariably in men, by its sudden onset, and by the patient's face becoming congested; and from spasm of the glottis, by the absence of any alarming symptom indicating long-continued closure of the glottis. Further, it has nothing to do with tabes, for as a rule it occurs without this condition being present, although the latter may be accompanied by laryngeal crises which assume the appearance of laryngeal vertigo. It is independent also of epilepsy; not one of the author's patients was an epileptic. Convulsions and subsequent exhaustion were absent.

The author explains the mechanism of the attacks as follows:—The irritation of the superior laryngeal passes to the expiratory centre, and excites the fits of coughing; at the same time it influences the inhibitory cardiac centre and causes cessation of the heart's action and consequent cerebral anæmia and loss of consciousness.

A certain pathological state must exist before these attacks can take place. Garel and Collet regard changes in the vessels due to age and arthritic conditions as the predisposing cause. The author attaches importance to alcoholism, all of his patients but one having been heavy drinkers.

The prognosis hitherto has been favourable, perhaps because the cases have not been sufficiently long observed. A cure is not to be looked for from symptomatic treatment, but rather by controlling the predisposing fundamental condition.

A. B. Kelly.

## ŒSOPHAGUS.

**Delatour, H. B.**—*Removal of Foreign Body from the Œsophagus by Œsophageal Forceps, guided by the Aid of the Fluoroscope.* "Med. Record," N.Y., May 1, 1897.

ON February 13th a boy of four years was brought, with a history of having swallowed an iron washer on the 9th, and inability to swallow solids and only a little fluid since. It was located by auscultation during swallowing to the level of the fourth dorsal vertebra. A skiagraph was taken, and shows the washer very distinctly. The ease with which it was visible with the fluoroscope determined the writer to attempt its removal with its aid. Accordingly the following day the boy was chloroformed, and after two attempts it was withdrawn. The total time occupied was twenty minutes.

R. Lake.

**Franken, Fr.**—*An Artificial Palate and Teeth in the Œsophagus.* "Münchener Med. Woch.," Feb. 9, 1897.

REPORT of a case. When first seen the patient's breathing was noisy, strained, and rapid; the face and lips were cyanosed; and frothy, bloody-serous sputum flowed in large quantities from the mouth. Pulse good. Swallowing was painful. Gradually improvement in the breathing took place, but swallowing became impossible. The larynx and sides of neck were very tender to touch. The plate and teeth were accidentally discovered on the second day and removed with the fingers through the mouth.

*Arthur J. Hutchison.*

**Rumpel, Th.**—*The Clinical Diagnosis of Spindle-shaped Dilatation of the Œsophagus.* "Münchener Med. Woch.," April 13 and 20, 1897.

RUMPEL describes the symptoms, etc., of a case under his observation in which he diagnosed diffuse spindle-shaped dilatation of the œsophagus. The following experiments were carried out on this patient:—

1. On introducing a tube into the œsophagus a turbid milky fluid (about three hundred cubic centimètres) flows out whilst the tube is passing from twenty-eight to fifty centimètres from the teeth. This fluid is alkaline, and contains sugar. At fifty centimètres from the teeth the sound is resisted, and only after considerable difficulty is passed into the stomach (typical stomach contents now flowing out).

2. Introduce a tube, attached to a filler, thirty centimètres into the œsophagus; pour in three hundred cubic centimètres of neutral fluid, coloured with blue litmus. By raising and lowering the filler the fluid can be poured backwards and forwards between the filler and the œsophagus. Not a drop is lost into the stomach, and it remains blue, thus showing that it does not come into contact with the stomach or stomach contents.

3. Pass a large-sized stomach tube right down into the stomach, and leave it there. Pass alongside of this a second smaller tube forty centimètres into the œsophagus (*i.e.*, not far enough to by any possibility enter the stomach), and connect this with a filler. Pour into this three hundred cubic centimètres of fluid. It can all be got back again. This proves that the watertight division between the œsophagus and stomach is produced either by contraction of the lower end of the œsophagus round the thick tube, or else that the second tube passes into a large œsophageal diverticulum. This point is settled easily by a slight variation in experiment No. 3. Thus, instead of the thick stomach tube, with only one hole at its distal end, introduce a similar tube with one or more holes in its side. Now pour the fluid, as before, through the thin tube. If this lies in a large diverticulum the fluid will behave as in experiment No. 3; but, if not, the fluid will all flow through the holes in the large tube into the stomach.

4. Lastly, after pouring into the œsophagus fluid containing five per cent. of bismuth subnitrate in suspension, the size, shape, and position of the dilatation can be demonstrated by the X rays.

*Arthur J. Hutchison.*

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## THYROID.

**Jaboulay.**—*The Section of the Cervical Sympathetic Nerve in Goitres and Graves' Disease.* "Lyon Méd.," Feb. 7, 1897.

JABOULAY first advocated resection of the sympathetic nerve for the relief and the cure of thyroid hypertrophy. He relates three cases of that surgical proceeding.

1. A woman, thirty years of age. Graves' disease for three years. Cure in a few days.

2. A woman, sixty-four years of age. Enormous thyroid tumour, with tachycardy and tumour. These symptoms disappeared immediately after operation.

3. A woman, forty-two years of age. Graves' disease without thyroid tumefaction; cardiac arrhythmia. Rapid cure.

Jaboulay considers that resection is a typical method of relieving the exophthalmic goitre; the operation is easy, not dangerous, and without fear of trophic disturbances.

*A. Cartaz.*

**Sänger, A.**—*A Case of Graves' Disease treated by Operation.* "Münchener Med. Woch.," April 6, 1897.

THE most recent statistics of strumectomy are the following:—

(1) Up to January 1st, 1896, Allen Starr collected 190 cases. Of these, 23 died from the operation; 74 were cured; 43 improved; 3 remained *i.s.g.* (2) Francis Kinnicut ("Med. Record," April 18th, 1896) reported 187 operations. Mortality, 7 per cent.; cures, 30 per cent.; and a still larger percentage of improvement. (3) Ernst Mattiesen (1896) collected 117 operations, with 47·2 per cent. cures, 33·7 per cent. improvement, and 19·1 per cent. bad results.

The writer reports the case of a tailoress, twenty-eight years old, who after a severe attack of influenza in 1885 developed exophthalmic goitre, with rapid pulse, tremblings, sweatings, etc. The enlarged right lobe of the thyroid was extirpated. For a short time thereafter slight diminution in pulse rate was noted, but very soon that, as well as all the other symptoms, grew very much worse, so that now the condition of the woman is decidedly worse than before the operation.

The author is of opinion that operative treatment of exophthalmic goitre is a very doubtful procedure.

*Arthur J. Hutchison.*

**Silberstein, L.**—*A Case of Thyroidism.* "Deutsche Med. Woch.," March 11, 1897.

PATIENT, female, aged forty, consulted Dr. Silberstein on September 17th, complaining of a goitre; otherwise healthy. Thyroid tabloids, prepared by Döpper, were ordered.

October 5th.—No change in condition noted.

October 13th.—Silberstein found the tabloids had a penetrating smell and foetid taste: ordered Wellcome's preparation instead.

November 19th.—Slight decrease in weight; goitre as before; complains of weariness.

November 24th.—Marked cedema of lower limbs. Pulse, 108; temperature normal. Heart sounds pure. No albuminuria. Trembling of limbs, heat in the hands, heaviness of feet and legs, weariness, and great sleepiness. Stopped the tabloids. Improvement gradually set in, and by November 30th most of the symptoms had passed off, but the patient appeared like a convalescent from a severe illness.

Silberstein regards this as a case of blood poisoning due to the cumulative action of decomposed animal substance. It is not possible to be certain that tabloids containing animal extracts have always been prepared from fresh material, and it is almost certain that, even if the tabloids were quite fresh when made and bottled, they will be decomposed long before the bottle is emptied. This decomposition is not always to be detected by either smell or taste.

*Arthur J. Hutchison.*

## E A R.

**Cotterell, J. M.**—*A Case of Cerebral Abscess; Trephining; Recovery.* "Scottish Med. and Surg. Journ.," April, 1897.

THE patient, a man of twenty-three years, was admitted into hospital complaining of great pain in the head, of ten days' duration. He had had intermittent right otorrhœa since eighteen months old. Whenever it ceased cephalalgia came on. This was relieved and the discharge re-established by the use of warm boric lotions and fomentations. This time, however, these means had failed. He was dazed, constantly dropping asleep; his cerebration was slow, and he frequently moaned in his sleep. Anorexia and foetid breath were present. Temperature, 101.2°; pulse, 70 to 80; respiration, 16 to 18. No œdema, and only slight tenderness on deep pressure over the mastoid; no vomiting, shivering, or disturbance of the third nerve. The mastoid antrum was explored and found to contain a few drops of pus, the bone being very dense. The immediate result of this was—temperature fell to 97.4°, pulse to 60, and respiration to 16. For three days these all became normal, and then suddenly fell to—temperature, 97°; pulse, 52; respiration, 14; and pain became more intense. The sigmoid sinus was explored and found healthy, but an abscess was found and evacuated in the temporo-sphenoidal lobe. The patient was so well by the tenth day that the tube into the abscess was removed, but had to be replaced five days later for a return of symptoms, two ounces of foetid pus being removed. It was then eventually removed three weeks later, the patient making a good recovery. The author points out the effect the tension fever had of masking the more serious lesion.

*R. Lake.*

**Flanders, W. E. E.**—*Abscess of the Mastoid extending along the Course of the Lateral Sinus.* "Med. Record," N.Y., April 17, 1897.

IN this case the otitis was secondary to influenza, and operation was undertaken chiefly on account of increasing facial paralysis. The mastoid cells were broken down and filled with pus, and the lateral sinus was bathed in pus for two inches. Complete recovery.

*R. Lake.*

**Gellé (Georges).**—*Cerebral Complications (Pseudo-Meningitis) in the Course of a Chronic Otorrhœa. Mastoid Operation; Cure.* "Arch. Internat. de Lar., Otol., et Rhin.," March and April, 1897.

THE patient was a lady of forty, recovering from phlebitis, the sequel of a miscarriage. She had suffered with otorrhœa many years and had received but intermittent treatment. The lungs presented signs of tubercular disease. During the eight days preceding the author's first visit there had been severe headache on the left side and a certain indifference to the accustomed interests of life. When first seen she was in a state of semi-coma, not recognizing her friends; the temperature was above 40° C., and pulse small and rapid. Since the previous day vomiting had been persistent. There was no obstacle to the escape of pus, which was not foetid. No clear indication of cerebral complication was present, but mastoid operation was recommended; further interference to be undertaken if found necessary. The classical operation was performed and the suppurating antrum and cells cleared out. An uninterrupted convalescence followed. In the absence of evidence of retention of pus the author concludes that the condition was due to irritation or infectious œdema, dependent on the mastoid abscess, and which disappeared on disinfection of the focus of suppuration.

*Ernest Waggett.*

**Gradenigo.**—*Two Cases of Cerebral Abscess of Otitic Origin.* "Ann. des Mal. de l'Oreille," etc., April, 1897.

IN one of the cases—that of a child of six—cerebral abscess, consequent on an otorrhœa of long standing, was evacuated; but the patient succumbed to septicæmia, although the lateral sinus on exploration proved to be unaffected.

Bacteriological examination of the cerebral pus showed the presence of staphylococcus pyogenes aureus. Blood taken by puncture of the infiltrated tissues in front of the ear during the pyæmic condition was found to contain not only the staphylococcus, but the lanceolate diplococcus of Fraenkel.

Ernest Waggett.

**Grant, Dundas.**—*Tinnitus Aurium.* "The Clin. Journ.," Feb. 10, 1897.

THE distinction between entotic and subjective noises is not of much importance and often impossible to draw. A more useful clinical division is into noises occurring (1) with defective hearing, (2) with abnormal acuteness of hearing, and (3) with normal hearing. If noise is pulsating in character, we can determine if pulsation is produced in middle or internal ear by observing whether it is arrested by pressure on the common carotid or on the vertebral arteries. If pulsating noise is lessened on lying down it is probably anæmic; if audible on auscultation, think of intracranial aneurism. If non-pulsating and low pitched, it suggests venous congestion, especially if made worse by lying down and relieved by purgation. "Sea-shell" noise is usually due to contraction of tensor tympani, and occurs in chronic middle ear catarrh, or may be reflex in character. In obstinate cases of tinnitus with middle ear disease always try injections of paroline, through the Eustachian catheter, and one-grain doses of grey powder night and morning. The constant current is only of use where there is no middle ear catarrh. When the bromides fail to relieve try quinine experimentally, beginning with a quarter grain three times a day. In anæmic cases give iron with chloride of ammonium.

Middlemass Hunt.

**Harris, T. J.** (New York).—*Reports of over Sixteen Hundred Cases tested with the Hartmann Series of Tuning-forks.* "Arch. of Otol.," Vol. XXVI., No. 1, 1897.

FROM the results of this large series of cases the main conclusions arrived at are as follows:—In acute affections of the sound-conducting apparatus, including impaction of cerumen, there is involvement of the entire musical scale for air conduction and of the upper tones for bone conduction, this last point being held to indicate an affection of the labyrinth. In chronic suppurative and chronic catarrhal diseases of the middle ear, there is diminution of air conduction for the entire scale, but mostly for the low forks and least for the high ones. In diseases of the internal ear, air conduction suffers more for the high than for the low. Dr. Harris is convinced that all the information we can get from the set of five forks is to be got from the lowest and highest (c 128 and c<sup>4</sup> 2048 double vibrations per second). Rinne's test, except in cases of excessively poor hearing, is of doubtful value in diseases of the middle ear. The series of tuning-forks is of value in regard to prognosis, but the extent is not yet determined. In many cases tuning-fork tests do not conform to any of the recognized types, and can only be regarded as falling under the head of mixed diseases. [Vide observations on tuning-fork tests in this number.—D.G.]

Dundas Grant.

**Hartmann, A.** (Berlin).—*Hyperostosis of the External Auditory Meatus.* "Arch. of Otol.," Jan., 1897.

HARTMANN insists on the distinction between exostosis and hyperostosis. He has found the latter in one out of every six hundred and fifty patients, and regards them as anomalies of development confined to the pars tympanica, independent of

former suppuration, ceasing to grow with the growth of the individual, bilateral in occurrence, and distinctly hereditary.

*Dundas Grant.*

**Kuhn, A.** (Strasbourg).—*Clinical Contributions.* (1) *Otitis Media Purulenta on the Left Side (Meningitis or Cerebral Abscess)—Aphasia—Operation—Death from Meningitis.* (2) *Cholesteatoma of the Right Middle Ear—Death during the Operation from Entrance of Air into the Injured Sigmoid Sinus.* "Arch. of Otol.," Jan., 1897.

THE resemblance between the symptoms of meningitis and those of cerebral abscess in some cases is commented upon, and amnesic aphasia is mentioned as being generally regarded as a differentiating symptom. A case is quoted to show that this is often misleading, the sensory aphasia leading to an operation for abscess with negative result, the *post-mortem* examination revealing purulent meningitis and hæmorrhages in the second temporal convolution.

In the case of aërial embolism, sudden stoppage of respiration, cyanosis, and death occurred during the removal of a large cholesteatoma from the temporal bone. The cause was not suspected, and was attributed to the chloroform until the autopsy showed a slit in the sigmoid sinus, and air bubbles in the blood in the veins of the neck and the right side of the heart. There was not the classical "gurgling" noise at the time of the occurrence. The patient was highly anæmic. The writer quotes Senn's suggestion that when the accident has occurred [And been recognized.—ED.] the right ventricle may be punctured in order that the air may be evacuated.

*Dundas Grant.*

**Lichtwitz** (Bordeaux).—*A Case of Bezold's Mastoiditis. Opening of the Abscess in the Side of the Neck and in the Antrum; Resection of the Mastoid Process; Recovery.* "Arch. of Otol.," Jan., 1897.

A TYPICAL and successful case, to which is appended a valuable abridged bibliography.

*Dundas Grant.*

**Malherbe.**—*Opening of the Petro-Mastoid as applied to the Surgical Treatment of Chronic Dry Median Otitis.* "Arch. Internat. de Lar., Otol., et Rhin.," March and April, 1897.

THE author has operated on five cases of dry middle ear catarrh, with deafness and tinnitus, with results which he describes as "truly surprising." The procedure has consisted in gouging through the mastoid (frequently sclerosed) to the antrum, which is usually small, and subsequently enlarging the aditus ad antrum. Where tympanic bands and adhesions have been present these have been dealt with through that passage with specially devised instruments. Finally, the attic and the artificial fistula has been plugged with gauze. On the day following operation, audition, even through the dressing, had returned and tinnitus ceased. Two patients operated on a year ago state that the amelioration is maintained. In the aged and where hearing by bone conduction is absent the operation is inadmissible. The worse of the two ears should be operated on, and experience shows that the other ear participates in the resulting benefit.

*Ernest Waggett.*

**Sattler, R.** (Cincinnati, O.).—*A Case of Secondary Cholesteatoma of the Antrum and Mastoid Region.* "Arch. of Otol.," Jan., 1897.

AN instance of the gradual development of a cholesteatoma after the performance of a limited operation on the mastoid, and only causing serious symptoms after many years. In this case the trouble in a patient, aged seventeen, dated from the second year of life.

*Dundas Grant.*

**Spira** (Krakau).—*Latent Otitis Processus Mastoideus resembling a Neuralgia of the Trigemini.* "Wien. Klin. Rundschau," 1897, Nos. 17 and 18.

*History.*—Otit. med. exud. occurring after influenza. Paracentesis. Cure in a

short time. Afterwards always pains in the head, and especially in the corresponding side of the throat. Later, paralysis of the nerv. abductus. As there have not been any signs of an inflammation of the processus mastoideus the author thought that all the pains were caused by a neuralgia of the trigeminus after influenza. But all special treatment of the supposed neuralgia made the pains and symptoms worse. Only after half a year one could make a distinct diagnosis of an inflammation of the processus mastoideus. Operation was performed, and the patient cured after six weeks.

The author says he does not know any other case (?) where such vehement cephalalgia existed without any symptoms of an affection of the middle ear or the processus mastoideus; and, in spite of it, the reason of this violent neuralgia was an otitis of the processus mastoideus. Then the author cannot explain the paralysis of the nervus abductus; he does not think it was caused by reflexion from the ear. His meaning is the paralysis was caused by a neuritis after influenza. He concludes that one ought to think of a central inflammation of the processus mastoideus in cases of such vehement neuralgias of the nerv. trigeminus. *R. Sacks.*

**Swain, H. L.** (Newhaven, Conn.).—*Four Cases of Otitis Media Purulenta, with Extension into the Skull and the Back of the Neck.* "Arch. of Otol.," Jan., 1897.

THE first was an acute case which lingered on from April till June 20th, with continuance of discharge, narrowing of the meatus, polypus formation, and retroauricular swelling. Constitutional and cerebral symptoms indicated the need for mastoid operation. The antrum was comparatively normal, but pus was seen running in a thin stream out of the bone into the wound from its upper part—in fact, from an epidural abscess. Rapid recovery followed free opening. The route of the extension to the interior of the cranium was not discovered.

In the second case, with somewhat similar phenomena, the antrum was undiscoverable, and it seemed probable that the pus took its peculiar course owing to the poor development of the mastoid diverting towards the upper cells.

In a third case meningitic symptoms supervened on top of a chronic suppuration of the middle ear. Death took place, and there was found in the descending horn of the lateral ventricle a purulent clot, in a quantity of turbid serum. There was an adhesion of the adjacent dura mater to the tegmen tympani, which was eroded. The writer comments on the absence of pyæmia and of meningitis. [The latter point illustrates Koerner's dictum, that in chronic suppurative cases there is often the formation of adhesions which prevent infection of the meninges, though allowing it to reach the deeper structures.—ED.]

The fourth case was a subtrapezial abscess resulting from a "Bezold" perforation of the inner surface of the top of the mastoid process. *Dundas Grant.*

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## REVIEWS.

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**Heymann.**—*Handbuch der Laryngologie.* 7, 8, und 9 Lief. (Wien: Hölder. 1896.)

THESE three parts of Heymann's manual contain a number of articles on diseases of the nose and pharynx. Dr. Bloch contributes an introductory paper on the general symptomatology of pharyngeal and nasopharyngeal diseases, which will be found most interesting reading. He

discusses *seriatim* the changes in secretion, sensibility, movement, taste, and smell met with in pharyngeal disease, as well as the disturbances of hearing, voice, speech, and breathing. Under alterations of voice, after making clear the distinction between rhinophonia aperta, or nasal voice, and rhinophonia clausa, or "dead" voice, the author shows how the latter may be replaced by the former after a successful operation for adenoid growths, through the imperfectly developed soft palate failing to close the naso-pharynx. Under disturbances of breathing will be found a most complete account of the symptoms of adenoid hypertrophy of the naso-pharynx. The changes in the facial muscles, the palate, the teeth, the upper air passages generally, and the chest walls are fully described and their causation discussed.

The greater liability of children who are mouth breathers to certain infectious diseases, especially diphtheria and whooping-cough, is insisted on, and the comparative immunity of very young children is attributed to the fact that they are rarely mouth breathers. But the rapid fall in the liability to diphtheria which takes place at puberty, even in mouth breathers, seems to us to indicate some other cause for the immunity of infants besides the habit of nasal breathing.

That a connection exists between certain defects of speech—stammering and stuttering—and enlargement of the pharyngeal and faucial tonsils is universally recognized. Attention was first drawn to this fact by the English traveller Catlin. The explanations which have been advanced to account for this coincidence have been unsatisfactory. That refuge of ignorance, "reflex action," has been called in to aid in this as in many other difficulties. Dr. Bloch faces the question in the true scientific spirit, and suggests a twofold explanation. (1) Children with adenoid hypertrophy of the pharynx often suffer from rapid mental exhaustion (aproxexia), which renders it difficult for them to learn and execute the very exactly co-ordinated movements of articulate speech. (2) There is the "myotonic element" of stuttering, due to the hypertrophic changes in the muscles of the lips, lower jaw, and palate which are brought about by their constant action in maintaining a free passage for mouth breathing. When called upon for purposes of articulation the movements of these muscles are imperfect, being "too weak or too strong, too brief or even "tetanic, too little under voluntary control, and not properly co-ordinated."

The article on the "General Therapeutics of Pharyngeal Diseases," also from the pen of Dr. Bloch, is not equal to the preceding one. It does not exhibit the thoroughness which characterizes the other articles, and the instruments figured for use in local treatment are antiquated in pattern. Speaking of operations for adenoids, the author says that a general anæsthetic should only be employed in exceptional cases, as in troublesome children, who cannot otherwise be kept still. He does not even mention the use of nitrous oxide, which has been so extensively and successfully employed in this country in recent years.

Dr. Kronenberg writes of the "Acute Inflammations of the Pharynx and Naso-Pharynx." He is a supporter of Semon's views as to the pathological identity of the acute infectious inflammations of the pharynx. In spite of the clinical distinctions between erysipelas, phlegmonous

pharyngitis, and the "acute infectious phlegmon" of Senator, they are all, he thinks, due to the same specific cause. The attempt to separate erysipelas from the others as being caused by a specific streptococcus (Fehleisen) has broken down, since that micro-organism is not to be distinguished, either morphologically or biologically, from others which give rise to phlegmonous processes.

A very complete article on "Pharyngeal Diphtheria," with an excellent historical introduction, is from the pen of Prof. Hoppe-Seyler. Regarding the methods of dissemination of diphtheria, we observe that the author does not agree with the view, once so commonly held in this country, that the effluvia of drains can carry the disease germ. He also objects to the view that the disease may be acquired from the lower animals, on the ground that bacteriological examination has so far failed to show that these animals ever suffer from true diphtheria. The plan which this author has adopted of describing first the general disease diphtheria, and then the special disease pharyngitis diphtherica, does not appear to us a good one, as it has led him into pages of repetition which are tedious to the reader. Under the head of diphtheria everything could have been said, with a great saving of printer's ink and of the reader's time.

A similar objection might be raised to Dr. Hajek's paper on "Suppuration and Ulceration of the Nasal Cavities," for the questions of differential diagnosis which he discusses must come up again in considering those diseases in which suppuration and ulceration occur. Dr. Hajek's article is, however, a very interesting one. He thinks there is a tendency at present to refer all nasal suppurations to sinus disease, and to overlook the fact that the general mucous membrane of the nose can also give origin to a profuse purulent discharge. This we all recognize in the rhinitis of the infectious fevers. In influenza purulent discharge from the antrum is not uncommon, but there may also arise a purulent discharge from the nasal mucous membrane, which may last for a long time. These, however, are all examples of acute suppuration. But a doubt has been thrown upon the occurrence of a profuse chronic purulent discharge except from disease of one of the accessory cavities. The typical example of a chronic suppuration of the nasal mucous membrane, Dr. Hajek replies, is found in simple ozæna. It also occurs in circumscribed disease of the middle meatus, or may be secondary to nasal polypus.

A brief and very incomplete article by Dr. Bloch on the "General Therapeutics of Nasal Diseases" does not contain anything calling for remark.

Dr. Gerber's article on "Rhinitis Acuta" is interesting, and certainly most comprehensive. Under this title he includes acute nasal catarrh, hay fever, paroxysmal sneezing, membranous rhinitis, and coryza neonatorum. It does not seem to us a good classification which brings together diseases differing so widely in their pathology and etiology as acute nasal catarrh, paroxysmal sneezing, and hay fever. The two last are evidently neurotic disturbances, and do not show any of the characters of an inflammatory process. To discuss them together under the head of acute rhinitis is only confusing.

Of pseudo-membranous rhinitis the author has much of interest to say. He agrees with the prevailing opinion that in the great majority of these cases we have to do with true diphtheria. In answer to the question, Why are the general symptoms in these cases so mild, or entirely absent, if they are diphtheritic? he replies, Have we not all seen cases of diphtheria in the pharynx, larynx, and conjunctiva, without general symptoms? But this does not get us out of the difficulty. We all know that nasal diphtheria, when it occurs as an extension from the pharynx, is almost always fatal. How comes it, then, that these cases of diphtheria originating in the nose are so mild? To this question we have as yet seen no answer.

*Middlemass Hunt.*

**Bishop.**—*Diseases of the Ear, Nose, Throat, and their Accessory Cavities.* By SETH SCOTT BISHOP, M.D., LL.D. (The F. A. Davis Company, Publishers, Chicago.)

THIS work has been specially written for medical students and general practitioners who may wish for a book on the diseases of the ear, nose, and throat. The object of the author has been to simplify and condense the work so as to constitute a key or introduction to the exhaustive treatises already in the field, and it is only fair to say that he has been thoroughly successful. While not competing with other and larger works, the present one gives a very practical introduction to the study of diseases of the ear, nose, and throat. Teachers will find it an excellent work to recommend to the class for whom it is intended, and practitioners will find it an exceedingly useful and ready work for reference. The publishers have also done their work in the most satisfactory way. Dr. Bishop is to be congratulated upon the successful way in which he has carried out the work, but some of the plates might well be replaced by more recent ones.

*J. Macintyre.*

**Owen.**—*Surgical Diseases of Children.* By EDWARD OWEN, M.B., F.R.C.S. (Cassell & Co., Limited.)

MR. OWEN has written an excellent book, and at the same time has managed to compress into a comparatively limited number of pages what he has to say upon an extensive subject. The whole work is extremely creditable, and although we are mainly interested in those parts which relate to our own special section, a word of praise generally may be here given. This work must be of extreme value to practitioners or students who may not have special treatises within their reach on special branches of surgery and medicine. Such a book as the present will be found useful to many even more favourably placed, an account of the able manner in which the author has treated the subjects from his own personal experience and standpoint. The chapters devoted to croup, diphtheria, laryngitis, diseases of the pharynx, nose, and ear, and the operative measures of tracheotomy are exceedingly valuable, and show an intimate acquaintance with recent literature and methods. The illustrations, photographic reproductions and arrangements, are worthy of great praise.

*J. Macintyre.*

**Wright.**—*The Induction Coil in Practical Work.* By LEWIS WRIGHT.  
(Macmillan & Co., London.)

THE study of the Röntgen rays has become of such importance to all surgeons that any reliable guide to the working of the apparatus will be welcomed by the profession. Mr. Wright's works in other departments of physical science have deservedly held an extremely popular place in scientific circles, and the same may be predicted for the present volume. The practical working of the apparatus and the theories involved therein are clearly and concisely stated. The book is well illustrated with excellent photographic reproductions and many plates. We can thoroughly recommend it to anyone desirous of obtaining useful information on a physical subject which must have an important bearing on the future of medicine and surgery.

*J. Macintyre.*

**Lautmann.**—*Atrophic Ozæna: Clinique, Pathogeny, and Serumtherapy.* (Paris: Henri Jouve, 1897. And also "Ann. des Mal. de l'Oreille," etc., Mar., 1897.)

THE author describes at length the clinical signs of atrophic ozæna, a specific disease which at some time during its course presents each of the following characteristics, viz.: (1) The presence of the special odour. (2) The constant presence of an abundant secretion, muco-purulent or dried into crusts. (3) A progressive atrophy, leading to complete disappearance of the mucosa and bones of the turbinates. To this triad may be added the constant presence of Loewenberg-Abel bacilli in the secretion, the tenacious character of the disease, which knows no arrest or cure other than the complete loss of the affected parts. With regard to scrofula as an etiological factor, the author finds no larger proportion of scrofulous individuals among the ozæna cases than is met with among the general run of hospital patients. Careful questioning and examination has failed to elicit evidence of congenital syphilis. At the present day three theories of the pathogenesis of the disease are accepted:—

1. The inflammatory theory.
2. The microbean theory.
3. The nervous theory.

(1) To the inflammatory theory the objection must be raised that its authors fail to explain the specific quality of an inflammation which leads to so unusual a result as the disappearance of the parts inflamed. (2) The microbean theory is based on the constant presence of the bacillus mucosus in the discharge, and also (Belfanti, Vedova) on the presence of pseudo-diphtheritic bacillus in the mucous membrane, coupled with the beneficial action of diphtheria antitoxin. The author finds both these organisms constantly present, but he is convinced that the writers named are mistaken in thinking that the pseudo-diphtheria bacilli are within the mucosa. The error has arisen from contamination of small portions of mucosa during the process of removal, and he finds that portions treated with antiseptic precautions are free from micro-organisms.

In criticising this theory the author shows that neither of these organisms alone can be the cause of the disease, nor have we any right

to assume that a combination of two non-specific bacilli can give rise to a specific set of symptoms, and particularly so in this instance, in which the bacillus mucosus is not found in intimate relation with the tissues. In any case, the bacillary element in the etiology calls for the presence of some other factor, and the author considers that this want is met by the assumption of a tropho-neurosis affecting the secretion and the vitality of the mucosa. The natural history of the disease falls in well with this assumption, for not only is the atrophy of the bone best explained by trophic influences, but careful personal inquiry shows that all cases begin with hypersecretion. Crusts then begin to appear, but it is not until these have for some time formed a feature of the case that the odour commences. He considers that a tropho-neurosis becomes complicated with a chronic rhinitis, and that later certain saprophytic organisms become implanted on the deteriorated mucosa.

The results of serumtherapy seem to be promising. The author relates seven cases treated by himself. The most manifest result was the disappearance of the smell, which took place in every instance. The secretion was not modified in quantity, but crusts were said to be more readily removed. Tumefaction of the mucosa occurred, and bleeding was induced even by the introduction of the speculum. The dose was in most cases 10 c.c., injected subcutaneously every two days. At the time of writing the experiments were still in progress.

At the same time four control cases were injected with normal saline solution. In three of these the odour much diminished and altered in character, so that with one irrigation a day the patients were not noticeably unpleasant.

Serumtherapy does then offer a method of combating the principal symptom, and where antitoxin is contraindicated some success may be expected from saline injections. It would seem that the antitoxin directly in a specific manner affects the microbean elements in the disease. May we not see, however, in the results of injecting indifferent fluids a stimulating action on the nervous system by which the disease is fundamentally checked?

Thus Belfanti and Vedova's discovery may lend weight to the nervous rather than to the microbean theory of atrophic ozæna.

*Ernest Waggett.*

#### APPOINTMENTS, Etc.

Dr. FELIX SEMON has been granted a knighthood.

Dr. H. TILLEY to be Surgeon to the London Throat and Ear Hospital.

Mr. S. PAGET, F.R.C.S., to be Aural Surgeon Middlesex Hospital.

Dr. H. GRADLE, M.D., to be Professor of Ophthalmology and Otology to Chicago Medical College.

Mr. R. LAKE, F.R.C.S., to be Surgeon Laryngologist to the North London Hospital for Consumption and Diseases of the Chest.

# Supplement

TO THE

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D<sup>r</sup> Whistler's case  
of  
Laryngeal Growth.

# THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

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## CASE OF PAPILLOMA OF THE LARYNX.

By Dr. J. McNEILL WHISTLER, M.D.

A. S., boot salesman, aged seventeen, applied at the London Throat Hospital in February, 1897, suffering from chronic naso-pharyngeal catarrh, with median otitis of three or four years' duration. The symptoms were deafness, associated with tinnitus, and otorrhœa recurring at varying intervals. There was congestion and swelling of the post-nasal space, but no adenoid growths. The tonsils were hypertrophied. The patient was in very good general condition; there was no history of scarlet fever, measles, or any acute disease having preceded the aural trouble, and it was clearly of simple catarrhal origin. Under treatment he steadily improved, and I need, therefore, not dwell further upon this phase of the case.

There were no symptoms of laryngeal trouble—neither pain or irritation, hoarseness, cough, spasm, or difficulty in swallowing.

The lad had never felt any inconvenience whatsoever of this kind, although in his business he was constantly using and straining his voice.

As I was off duty at the hospital for a few weeks after his admission, the case was not put before me until the following April.

Laryngoscopic examination showed, then, an oblong-shaped pedunculated growth attached to the right border of the epiglottis.

It was of a *snowy whiteness*, with a mammillary or warty-looking surface. It had a broad pedicle, but it was very freely movable, and as it frequently changed its position—flapping, so to say, into the interior of the larynx—it was remarkable that it had produced no discomfort.

Its size and appearance is very accurately shown in the coloured plate made for me by Mr. Way, taken by him direct from the laryngoscopic mirror.

Beyond this, with the exception of superficial congestion, with slight swelling of the epiglottis and ventricular bands, there was nothing to note.

The vocal cords moved freely, and the voice was perfect.

There was no infiltration of the tissues surrounding the growth, and certainly nothing pointing to an invading malignant disease.

In a most interesting case reported by Gleitsmann, of New York, in the "Transactions of the American Laryngological Association," he records the following quotation from a lecture delivered by Semon ("Clinical Journal," February 20th, 1895): "Unusual snow-white colour, or grass-like appearance, of tumours, points strongly to malignancy"; and also the statement by Prof. Fraenkel that in an early stage carcinoma of the larynx often presents a strikingly white appearance.

I think that this will be admitted by all who have had experience in cancerous growths of the larynx. It has certainly been often noticed by me. At the same time, in the absence of other signs, I do not feel that too much stress should be laid upon this as a characteristic feature, nor do I suppose that these authorities referred to mean to do so.

In the case I have reported time alone can show if there be any further development. It is now nearly three months since I removed the growth in its entirety with laryngeal forceps, and the patient has had no sign of return.

The specimen was submitted to Dr. Pegler for examination, and I append his report.

#### DR. WHISTLER'S SPECIMEN OF LARYNGEAL TUMOUR.

The growth submitted to me measured about twelve millimètres in length, six millimètres in width, and five millimètres in depth. Its upper surface was flattish, minutely mammillated, and pale in colour. Sections cut parallel to the upper surface showed numerous primary papillæ ramifying from a central stem, and subdividing again into branchlets. Stained in logwood and benzo-purpurine, and examined microscopically, the central portion or core consisted of connective tissue, supporting at least one main vessel and one or more smaller ones, from which twigs could be seen to have issued perpendicularly and obliquely to the plane of section. Towards the site of attachment of the growth, the supporting connective tissue became dense and fibrous, taking a bright red stain. Large masses of extravasated red blood cells lay in the vicinity of the vessels, and there were also many collections of leucocytes, especially towards the margins. The papillæ were clothed in a hypertrophied covering of epithelium, presenting the following layers of cells from within outwards:—(1) A germinal layer of highly-stained columnar cells, merging into a well-marked rete Malpighii; here were numerous prickle cells, some of which were vacuolated; also scattered in this layer were transverse sections, varying in size, of other papillæ. (2) A stratum granulosum, bordered externally by (3) the usual horny layer. From these characteristic appearances I do not hesitate to pronounce the growth a papilloma.

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## REMARKS ON POST-NASAL ADENOIDS;

Conditions simulating their Presence or their Recurrence; Method of Operating.<sup>1</sup>

By Dr. DUNDAS GRANT.

AMONG the enormous mass of literature connected with the subject of post-nasal adenoids, it seems to me that there has been a constant repetition of the traditional observations, but there still remain a few points to which sufficient notice has not been directed. I allude particularly to the question of the recurrence of adenoids, and recurrence or persistence of the symptoms of adenoids, believing that the latter is at least as frequent as the former.

The recurrence of adenoids appears to me to be extremely rare, but all observations on this point are apt to be fallacious, in as much as a patient in whom recurrence takes place is more likely to be taken to some practitioner other than the one who originally operated. At the same time, if this were a frequent event, I am disposed to think that we should find it more strongly insisted upon by writers on the subject, and I think that I, as an individual, should have seen it more frequently than I have done. In my own experience the recurrence of adenoids to any material extent has only come under my notice in very young children.

As regards the recurrence or persistence of the symptoms of adenoids, this has been generally due to one or other of the following causes: first, the subsequent development of a hypertrophic condition of the nasal mucous membrane; second, the neglect on the part of the patient or its friends to keep up the energetic practice of nasal breathing; third, anterior projection of the atlas vertebra; and, fourth, fixed idea.

First, in cases of *very young children*, several of the other elements are apt to concur. There is a difficulty in getting the patient to breathe through the nose with intention, there is a certain difficulty in effecting a complete removal of the growths, and there is a greater predisposition to the proliferation of lymphoid tissue under very slight provocation. In the absence of a thorough insistence upon the practice of nasal breathing, there is a tendency for the normal development of the nasal cavities to be retarded. As a rule, however, this does not occur, because in appropriate cases the pleasure of respiring freely through the nose is generally sufficient to lead the patient to make use of that method.

In one of my cases (a boy of about twelve years of age, from whom I had removed adenoids) the symptoms returned in as pronounced a form as before the operation, so much so as to lead a skilful provincial surgeon to jump at the idea that the growths themselves had recurred, and even to believe on posterior palpation that he felt them there. This was absolutely due to the prejudice inspired by the apparently unmistakable physiognomical indications. The patient was brought to me and I was

<sup>1</sup> Read at the April Meeting of the British Laryngological, Rhinological, and Otological Association.

quite prepared from his appearance to believe that the growths had returned, in spite of the fact that I had removed them most completely. On post-nasal palpation I was able to assure myself that no recurrence whatever had taken place, and I took the opportunity of calling in a colleague to confirm my opinion. There was, however, a very considerable *hypertrophy of both inferior turbinated bodies*, and under the galvanocautic treatment the size of these bodies was satisfactorily diminished, while the "adenoid" symptoms entirely disappeared.

An anterior *projection of the atlas vertebra* has in several of my cases been the apparently sole, or at least supplementary, cause of the rapid recurrence of the adenoid symptoms. In a tall, over-grown young lady, aged fourteen, the most remarkable mental, aural, and other general disturbances were present, until in September, 1892, I removed the then existent crop of adenoids in her naso-pharynx. The improvement in her condition was extraordinary and her stature increased to an unusual extent. Four years later she was again brought to me on account of a recurrence of the symptoms, and probably of the adenoids. On examination of the naso-pharynx there was indeed a slight redevelopment or regrowth of the pharyngeal tonsil, though not sufficient to account for the nasal obstruction, but while making the examination I was struck by the remarkable degree of bulging of the cervical vertebræ (the atlas, and possibly to a slight extent the axis), which diminished the lumen of the air passage between the hard palate and the posterior wall of the pharynx to such an extent as almost to prevent the introduction of the finger, and certainly to make it extremely difficult to remove the small mass of lymphoid tissue in the hollow lying above this projection. The stenosis of the passage was somewhat diminished when the patient's head was raised forcibly and not bent either forwards or backwards. In point of fact the patient had acquired a somewhat exaggerated curvature, and allowed her head to sink, so that the bulging was exaggerated from her defective attitude. By means of Quinlan's form of post-nasal forceps, of which I append an engraving, it was very easy to remove the growths, as will be obvious when the somewhat peculiar shape of the forceps is considered. This was supplemented by the use of Golding-Bird's post-nasal curette. This latter instrument is obviously the only one which has the slightest chance of reaching such a recess as I have described, where any of the usual modifications of Gottstein's instrument would have been obviously unavailing. This patient was encouraged to hold herself up, and was placed under the care of Miss Chreiman for gymnastic exercises. Mr. Edward Cotterell examined her on account of some obscure injury to the lower part of the spine, and diagnosed a traumatic coccygodynia. A marked improvement took place, the removal of the adenoids being only a supplementary element in this case, as I have no doubt it is in many others.

In numerous instances I have found this anterior projection of the atlas, and I think it deserves more attention than has hitherto been paid to it. A reference to it will be found in the final chapter of Zuckerkandl's "Normal and Pathological Anatomy of the Nose and Nasal Cavities"; but its influence as an element interfering with proper pronunciation after

the operation for cleft palate has been alluded to with considerable emphasis by a writer upon that subject.

Lastly, my friend Dr. Ezard referred to me, for my opinion, a case in which he believed he had removed the adenoids completely. In spite of this, and in spite of the fact that the nasal passages appeared to be perfectly clear, the patient failed to acquire the art of breathing through the nose. I was able to confirm Dr. Ezard's opinion that the operation had been absolutely complete, and that there was no mechanical obstruction, and I could only explain the persistence of mouth breathing by the fact that the patient suffered from the *auto-suggestion* or *fixed idea* that she was unable to breathe through the nose. By somewhat roughly applied moral and physical suasion, while keeping her mouth shut I was able to force her to breathe through her nose. When at length she was once convinced that the passages were free, she continued to make use of them in the natural way.

I offer these few considerations as having in my opinion considerable importance, and I believe a slight modicum of novelty, for the consideration of my medical brethren. They seem to give some explanation of certain results which have tended to bring the operation for the removal of post-nasal adenoids into unnecessary disrepute.

In operating on post-nasal adenoids, on any except very young children, I find the anæsthesia gained by nitrous oxide, or nitrous oxide and oxygen, administered by a skilled person, is amply sufficient, if the operation is properly methodized and if all arrangements are completed beforehand, so that not a second of the anæsthesia is lost.

The mouth is propped firmly open by means of a gag, preferably Wingrave's. I protect my left forefinger by means of a leather guard, and I soak the finger-nail in absolute alcohol, which may contain five per cent. of carbolic acid. As soon as the patient, who is in a sitting posture, is completely under the anæsthetic, I quickly introduce the left forefinger behind the soft palate, and, while scraping together the adenoid growths, especially from the fossæ of Rosenmüller, I acquaint myself with the general bearings of the parts. This done, I introduce a fine pair of post-nasal forceps (below described), *and which I have already at hand*, removing in one or two applications the bulk of the growth. I then very rapidly scrape the vault and back wall of the pharynx with Golding-Bird's curette, and finish up with a digital examination, re-applying, if necessary, the curette.

I attach great importance to the information as to the seat of origin of the growths derived from the first introduction of the fingers. Occasionally the roof of the naso-pharynx is comparatively horizontal, and the growths are chiefly situated in that position. In such a case I make most use of the forceps, either my own or Quinlan's. On the other hand, if the roof more nearly approaches the vertical, or the growths are situated chiefly on the posterior wall, I frequently omit the use of the forceps altogether, and confine myself to Golding-Bird's curette. Again, as I have mentioned above, should there be any considerable projection of the atlas, I resort to the use of Quinlan's forceps.

The forceps which I find in general most useful are made on the

model of the Quinlan as regards the handle and shanks. They are light, and though quite long enough, are not so unwieldy as Löwenberg's original model. Their tips are spoon-shaped and fenestrated, so that they can hold a considerable amount of tissue at a time. They are flat from side to side, so that they can be easily introduced between the mass of adenoids and the side walls of the naso-pharynx, and they are comparatively wide in their antero-posterior measurements. The cutting surface is carried down posteriorly, and not in front; but at the same time they are not allowed to gape, so as to be incapable of grasping any growths adherent to the posterior choanæ. They have been made for me by Messrs. Krohne and Sesemann, and I have found them more universally applicable than any others that I know.

Quinlan's forceps will be seen to possess the above qualities, but they have a peculiar backward projection of the scoop-like tips, which hardly seems adapted to the conventional anatomy of the naso-pharyngeal space. Be that as it may, I have found them extremely serviceable all round, and in cases of projection of the atlas vertebræ absolutely indispensable.

Golding-Bird's post-nasal curette differs from Gottstein's in the fact that its cutting edge, instead of being directed more or less vertically downwards and flush with the ring, of which it forms part, looks backwards beyond the general surface of the ring. In this way it is something like a finger-nail turned round, and is peculiarly well adapted for scraping down the posterior wall. At the same time, its shank is so fine that it is possible to manipulate it while the forefinger of the left hand is in the naso-pharynx, a proceeding which is theoretically perfect, though practically uncalled for.

The only disconcerting incident in connection with the use of nitrous oxide gas for this operation is the occasional occurrence of a more or less marked degree of opisthotonos, but if the attendants are ready for this, it need not interfere with the progress of the operation if the surgeon is prepared to proceed in spite of it. The advantages of the sitting posture are very considerable, and if the precaution is taken of binding a strap or a jack towel round the patient's thighs and the seat of the chair, the inconvenience arising from the contraction of the erectors of the spine is of little moment.

So much for the method of operating under nitrous oxide; the question of its adoption in preference to chloroform or ether cannot be lightly set aside. It would be idle to pretend that in every case nitrous oxide gives as long a period of anæsthesia as one could wish for, or that it always permits of as absolute a scraping of the naso-pharyngeal mucous membrane as a longer anæsthesia would render possible. I hold, however, that in the majority of cases it gives quite as long a period of unconsciousness as one can possibly require with a properly methodized operation, and in almost every case quite as much as is necessary, although there can be little doubt that the more complete the operation the less chance there is of recurrence. I am not in possession of any information to prove that the percentage of recurrences is greater in cases in which nitrous oxide alone has been used than in cases in which the more prolonged anæsthesia of chloroform or ether has been produced. With any of these there is a certain fractional probability of recurrence, and we

have to look for other causes to account for it. On the other side we have to balance with the greatest seriousness the risks attaching to chloroform anæsthesia, and probably necessarily greater in an operation for a disease which in itself already causes an impediment in respiration ; and we have to go no further for a somewhat sensational confirmation of this point than the melancholy scene enacted in the Coroner's Court within the last eight days.

In very young children chloroform is exceptionally well borne, and the apparatus necessary for the administration of gas is unduly alarming to them. We are quite justified in making this exception to the rule of administering nitrous oxide, otherwise this unimpeachable anæsthetic ought, in my opinion, to be exclusively used.

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## NOTES ON VARIOUS LESIONS OF THE EAR, THE NOSE, AND THE PHARYNX

**Found in the Children in the Institutions for the Deaf and Dumb. The  
Methods of their Treatment.**

By Dr. HAMON DU FOUGERAY (Le Mans).<sup>1</sup>

THE writer has been specially occupied for several years with the medico-scholastic institutions for afflicted children, and he has published, in collaboration with Couétoux (Nantes), the first manual, with a preface by Bourneville, giving a *résumé* of this question. He shows, in the first instance, how defective the organization for such instruction is in France. As regards the deaf and dumb, the medical supervision is actually wanting, in spite of the fact that the whole subject of deaf-mutism is primarily dependent upon pathology and physiology. Having had to treat as a specialist for the last year the children belonging to an institution for the deaf and dumb, he has made a careful examination of the state of the nose, pharynx, and ears. Out of forty-five children twenty-three were totally deaf, and twenty-two had some remains of audition in various degrees. The cause of the deafness has generally been very difficult to determine, because the children are often admitted without medical examination ; and even when this has been made, the certificates when they have been handed in have been of little value. The examination of the twenty-two who were not completely deaf, revealed, in eight, lesions of the internal ear, and in fourteen lesions of the middle ear only. Up to the present the author has confined his attention to the fourteen in whom otitis media alone was present. In twelve he found chronic catarrhal otitis media, and in two the adhesive form resulting from purulent otitis ; in six cases there was obstruction of the Eustachian tubes.

The lesions of the rhino-pharynx and of the nose were as follows : hypertrophic rhinitis, six times ; enlargement of the adenoid

<sup>1</sup> Author's abstract of a paper read before the French Society of Laryngology, etc., April, 1897.

tonsils three times. In none of these fourteen children were there any changes of note in the larynx.

The treatment was divided as follows: removal of adenoid vegetations and of tonsils in six cases; cauterization of the turbinated bodies and the employment of bougies in eight; inflation in fourteen.

As regards operations, the writer dwells upon the difficulties which he met with at first in obtaining the consent of parents for the six operations, which were the first which had been practised in the institution since its foundation in the year 1852.

Before giving the results of the treatment the writer refers to their object. There are three indications: first, to remove all obstruction to nasal respiration; second, to remove any condition interfering with the articulation of words; third, to endeavour to improve audition in every possible way.

This classification points specially to the oral method universally employed in the instruction of deaf mutes at the present day. For learning to speak, the deaf mute ought to respire normally. It is more necessary for him than for the normal child that there should be nothing interfering with articulation. These two primary principles are not sufficiently recognized by the teachers in the institutions, because no one has enlightened them upon this point.

Lastly, any improvement in the hearing, even in the slightest degree, is of the greatest service to the deaf mute. Those who hear, even though only words uttered close to the ear, acquire more easily and more thoroughly the oral method than the others. A radical cure is not the only object of the medical attendant, and he ought not to neglect any case where the slightest improvement in audition may be obtainable.

The results obtained in six months by the author have been—(1) As regards respiration: six cases, six cures. (2) As regards speech: speech distinct, two cases; speech improved, four cases. (3) Hearing power: fourteen cases, thirteen improvements.

There is no difficulty in drawing an inference from these encouraging results, and it is much to be desired that all institutions should have a medical specialist, devoting his time entirely to the pupils and the instruction of the young deaf mutes, who have been absolutely neglected up to the present.

*D. G.*

## THE PRELIMINARY TRAINING AND METHODS OF OPERATING ON LARYNGEAL GROWTHS *per vias naturales.*

By J. MIDDLEMASS HUNT, M.B.,<sup>1</sup>  
Laryngologist, Royal Infirmary, Liverpool.

It was with much pleasure that I accepted the invitation of our President to open a discussion on "The preliminary training and methods of operating

<sup>1</sup> Read at the July meeting of the British Laryngological, Rhinological, and Otolological Association.

on laryngeal growths *per vias naturales*." First, because the subject is one in which I have taken some interest, and secondly, because it has not, so far as I know, been up for discussion before any Society of Laryngologists within recent years. The rapid advances which laryngology has been making in other directions have tended to throw this subject into the background, and it is time to look round and inquire if the great increase in the number of workers in our specialty has led to any improvements in our methods of intralaryngeal operation for benign growth. As you are all aware, it was in this department that the early laryngologists won their greatest triumphs, and it was the skill required for these delicate manipulations which largely justified the separation of laryngology from general surgery. We are reminded of this when we recall the names of Von Bruns, Stoerk, Fauvel, Schroetter, and Mackenzie, all known to us as dexterous intralaryngeal operators. I sometimes doubt whether the laryngologists of the present generation are equal in manipulative dexterity to the men of the pre-cocaine era, as we may call it. In their time no one ventured to introduce a laryngeal forceps till his hand and eye had become thoroughly trained by long-continued practice ; in ours, the six weeks' student of some post-graduate course thinks himself equal to any intralaryngeal operation. Now, that the introduction of cocaine anæsthesia has greatly shortened the preliminary training required by the patient, and has immensely simplified all intralaryngeal operations, must be admitted ; but that it has removed all difficulties, and has made it possible for the unskilled to operate with impunity is certainly far from correct. There are still cases which tax the resource and patience of the operator and the endurance of the patient ; cases in which some anatomical peculiarity of the tongue or epiglottis, something in the situation and character of the growth, the age of the patient, or an excessive irritability, only partially, or not at all, controlled by cocaine, renders intralaryngeal operation exceedingly difficult to accomplish. I think we sometimes over-estimate what cocaine has done for us. While it is true that in pre-cocaine times some cases required a prolonged training before operation, such was by no means the rule. In the great majority the patient was ready for operation in from three to eight days, if training was carried out systematically ; and the dexterous operator could, even in those times, often remove growths without any preliminary training at all. Then, as now, the tolerance and intelligence of the patient, the courage and dexterity of the operator, and the site, size, and nature of the growth were the factors which determined the length of time necessary to complete an intralaryngeal operation.

Has cocaine done away with the need for any preliminary training ? We do meet with cases in which a growth can be removed at a first visit, but I confess I have seldom tried, considering it better to educate the patient for a few days in the passage of instruments, and so make certain, if possible, of seizing the growth at the first attempt. As I mostly employ tube forceps for these operations, the forceps can be used as a laryngeal probe, and we thus gain a knowledge of any change in curvature, or in the setting of the blades, required for the case in hand. Cocaine does not allay fear or remove awkwardness on the part of the

patient, but a few days' training will. Of course, we must also be guided by the urgency of the symptoms and the time at the disposal of the patient.

There are two objections to cocaine anæsthesia of the larynx, which in my experience apply in rare cases only. In certain nervous subjects its effect is exactly contrary to that intended, and the patient becomes so irritable that no operation can be carried out. This has only happened once to me, in the case of a boy with laryngeal papillomata, on whom tracheotomy had been performed. Cocaine, though applied frequently and in strong solutions, only made things worse, and I had to remove the growths in numerous sittings without any anæsthesia. With some perseverance, however, the case did well. The tracheotomy tube, which had been worn for over a year, was removed, and there has been no recurrence in the five years which have since elapsed.

A second objection to cocaine as an anæsthetic in laryngeal operations is its uncertainty, and the short duration of the anæsthesia in many cases. I think the uncertainty is more due to the method of application, and the strength of the solution employed, than to any other cause. In applying cocaine to the larynx our object is to reach every part of the mucous membrane with the smallest amount of irritation and the least expenditure of the drug. To accomplish this three methods are in use: (1) swabbing by means of a brush or cotton wool mop; (2) the use of a fine spray; and (3) the introduction of the solution in drops by means of a syringe. No doubt all these methods bring about the same result, though probably the spray is the most perfect. I have never employed it, however, for this purpose, through fear of poisoning from the application of twenty per cent. solutions (as recommended by Bosworth), and have confined myself to the use of the cotton wool mop. Where this method fails, it is usually due to the use of solutions which are too weak or are not applied with sufficient care and thoroughness. As cocaine only acts on the parts it is brought into direct contact with, every part of the larynx must be reached with the brush. The pharynx, I think, is better left alone, unless it is very irritable, when the best application can be made by means of a spray of not more than five per cent. If cocaine be used in this way failure to procure anæsthesia will be rare, and symptoms of poisoning will hardly ever occur. While I have frequently seen poisoning follow its use in the nasal cavities, I have only seen it in one patient after an intralaryngeal application. In this case there was evidently a marked idiosyncrasy, as the patient had severe symptoms of cocaine poisoning on three separate occasions when a twenty per cent. solution had been applied before the removal of laryngeal warts.

As regards the strength of solution, I think that less than twenty per cent. will seldom suffice to produce complete anæsthesia, either in children or adults.

The duration of cocaine anæsthesia in the larynx is unfortunately comparatively short, lasting from three to seven minutes as a rule—rarely longer. Of course another application can be made, but one finds that if reflex irritability has returned, we seldom get such complete anæsthesia again at the same sitting. I do not employ any accurate method of

measuring the dose of cocaine, but my rule is that if three to six brushings with a twenty per cent. solution are not sufficient, it is better to postpone operation.

It is curious how the effect of cocaine will vary, even in the same patient, on different days. On one day we will get complete anæsthesia with two or three applications, and on another twice that number will fail.

Having trained our patient and got complete anæsthesia, how shall we operate? What instruments shall we employ? That will depend primarily on the preferences of the individual operator, and also on the size, character, and situation of the growth to be removed. Practically there are three methods of removing laryngeal growths. They may be torn off, or cut off, or scraped off. Technically these methods are named evulsion, abscission, and curettage (curetting).

For the evulsion of growths, forceps of various shapes and sizes are employed, the blades of which are slightly hollowed and have their edges serrated, so as to take a good hold. This method may be used for most growths, but is best suited for soft and more or less pedunculated growths. The objection to it is that, if the growth be firmly attached, we may remove along with it more or less of the mucous membrane; or even, if much force be used, may tear a vocal cord from its attachment. This once happened to Voltolini with the unfortunate result of involving him in an action at law. The amount of force used in this method must therefore be carefully regulated, and if the growth does not come away easily, it should be let go and some form of cutting instrument employed.

For the abscission of growths various instruments such as cutting forceps, knives, snares, and guillotines are employed. The laryngeal snare is an instrument which in pre-cocaine days found especial favour in this country at least. It is not an instrument of precision, and the man who relies upon it alone will not get very far as a laryngeal operator. Its chief merit is that one can scarcely do any harm with it. In two conditions only have I found it of use: in cases of multiple papillomata, where the larynx was so full of growth that one could scarcely help catching something, and occasionally in growths at the anterior commissure, which are often difficult to seize with forceps.

It is in regard to the use of cutting instruments that cocaine anæsthesia has wrought a great change in our operative methods. Formerly, in using snares and guillotines, the reaction of the larynx, and the consequent tension of the cords, was calculated on to assist in getting hold of the growth. With complete anæsthesia this reaction falls out, and the snare or guillotine becomes much more difficult to use on a flaccid relaxed vocal cord. The result of this change has been emphasized in a recent article by one of the most experienced laryngologists now living, Prof. Stoerk of Vienna. He says: "To operate with the snare or guillotine has become no longer practicable. I now employ very powerful strong forceps, such as those of Gouguenheim, the blades of which have highly sharpened edges." It is interesting to observe how closely this agrees with the views expressed, nearly thirty years ago, by the late Sir Morell Mackenzie in his "Essay on Growths in the Larynx."

In France and America, and also in this country, a favourite instrument

for many years has been a powerful cutting forceps, such as that of Mackenzie. I must confess that personally I have never been convinced of the advantages to be derived from the employment of such a powerful instrument in all forms of laryngeal growths, though I have had to use it in a few cases. In my experience this forceps prevents that accurate view of the field of operation which is indispensable to perfect safety, and I have therefore used for a number of years a sharp cutting forceps, fitting into Schroetter's handle, or the double curette of Krause.<sup>1</sup> I confess that I have been afraid of doing harm to normal structures with such large and powerful instruments as those of Mackenzie or Fauvel, a thing which has never happened to me in using those which I have described. That such an accident may happen, even to the most experienced, is evident from the fact that Mackenzie himself had in three cases out of a hundred to perform tracheotomy after the intralaryngeal removal of growths. I cannot imagine such an accident happening where an operation is carried out by fine cutting forceps, under full control of the eye. In this opinion I am confirmed by what Prof. Schroetter wrote to me some years ago. He then said that though he had operated on several hundred cases of laryngeal growths of all sizes, and in many where urgent dyspnoea was present, he had never required to perform a subsequent tracheotomy.

A form of cutting forceps which has been highly spoken of is that of our colleague, Dr. Dundas Grant. I have no doubt it is an efficient instrument, though I have no personal experience of its use. I only object to its name of "Safety Cutting Forceps." Here as elsewhere safety must lie in the trained hand and eye of the operator rather than in the instrument. I am afraid the name may mislead the inexperienced. I would remind all such that Dr. Grant has himself recorded at least one case in which he injured healthy parts with the "Safety Forceps," and I have myself seen a case in which a similar accident happened to another operator in using the same instrument.

I remember how the late Sir Morell Mackenzie, aware of the possibilities of harm which lay in his powerful forceps, used to insist that this instrument should never be introduced into the larynx more than once at the same sitting. As a contrast to this I should like to read you a case from Prof. Schroetter's lectures, which may not be known to some of the members present. It was one of a large papilloma attached along the edge of the right vocal cord and filling the cavity of the larynx. After a week's training of the patient Schroetter proceeded to operate. I give you a free translation of his words, which, to my mind, read more like the description of a siege than of a surgical operation. He says: "Next day, at 5.30 in the evening, I set myself to carry out this plan [which was to separate the growth at its attachment with a knife]; but as it turned out that the patient was too sensitive to permit of operation with the knife being carried out, I was forced to remove each lobule of the growth with the pincette."

Naturally, such an operation required much time, and especially in this case, as the bleeding obscured the mirror and the field of operation,

<sup>1</sup> As the vast majority of simple laryngeal growths are small in size, the cases in which these fine forceps are not applicable are very few.

so that often intervals of ten minutes must elapse, during which the patient sipped iced water. In this way we can understand that by half-past eight about two-thirds of the growth had been removed. "I then gave the patient the option of putting off the remainder of the operation till next day, but told him I would rather finish it at the time. He at once agreed to go on, and after half an hour's rest we continued under the same difficulties to operate until half-past eleven, when I was convinced that the growth was completely cleared away. I then proceeded to cauterize with nitrate of silver. As this was followed by bleeding, some more time went past before I was able to convince myself that there was still a small portion anteriorly to be destroyed, and by the time this had been accomplished it was already half-past twelve o'clock." "It is years since this operation," says Schroetter, "and I have often seen the patient since, but no recurrence has taken place." In this remarkable case I do not know whether to admire most the pluck and endurance of the patient or the skill and determination of the surgeon. It at least illustrates my point that a delicate instrument used skilfully may be introduced into the larynx an indefinite number of times without any bad result.

Cocaine anæsthesia has also largely done away with the argument in favour of the approach to a right angle which Mackenzie adopted in the construction of his forceps, in order to avoid touching the epiglottis. The catheter curve is now really an advantage, for by pressing on and raising the epiglottis it enables us to get a much better view of the anterior part of the larynx. The catheter curved instrument is also more easily introduced and takes up less room in the pharynx.

The use of knives for the removal of laryngeal growths has found but little favour in this country, but in Germany many operators have employed them with success, and much controversy has gathered round the question whether they should be open or guarded. The dangers of the unguarded knife are very obvious, and Schroetter has published some cases illustrating the harm that may result from their use even in skilful hands. The advantage which Gottstein claimed for them, that they permitted the eye to follow the operation throughout, is no doubt true; but it seems to me that fine cutting forceps meet the same indications, and are in most hands much safer.

A third way of removing laryngeal growths is by curettage or scraping. This was the principle of the rough and imperfect sponge method of Voltolini. It is still mentioned in all text-books, and I suppose will continue to be for years to come. It never was a method of much practical value, and is now entirely superseded by more effective instruments. The use of Heryng's curettes for cases of diffuse multiple papillomata has been especially advocated by Massei, who speaks very highly of his success with these instruments. I have a few times used a curette with great effect in clearing out small warts at the base of the uvula and in the anterior commissure.

The destruction of laryngeal growths by caustics is not now advocated by anyone. For application to the base of a growth with a view to preventing recurrence both nitrate of silver and chromic acid are still

sometimes employed. The former is too superficial in action to be of any real value, and chromic acid, which I used to employ, has now been replaced in my practice by the very delicate cutting forceps of Prof. Schmidt, of Frankfort, which enables one to remove the smallest scraps of growth, and so avoid the necessity for caustic applications. Of course this does not apply to laryngeal papillomata, for which we have as yet found no method to prevent recurrence. I think that brushing with pure lactic acid is probably the most effective application we know of at present.

The galvano-cautery has had its advocates, but can never be a safe instrument to use on a vocal cord. That it might be suitable for certain vascular tumours occurs to one, in view of the cases of severe, or even fatal, hæmorrhage recorded by Ferreri, Heinze, and Grünwald. But unfortunately we do not know beforehand the cases which are going to bleed, and fortunately this accident is an exceedingly rare one in the records of endolaryngeal operations for simple growths. For the destruction of so-called singers' nodes the galvano-cautery has also been recommended, but the fine forceps of Schmidt, already referred to, is a most effective and much safer instrument for this purpose.

Two methods of dealing with laryngeal growths which have been introduced in recent years, and of which I have no personal experience, are that of Scanes Spicer for operating under combined chloroform and cocaine anæsthesia, and the direct method of Kirschstein. Both methods have proved, I believe, of real value in those extremely difficult cases of multiple papillomata in young children.

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## SOCIETIES' MEETINGS.

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### LARYNGOLOGICAL SOCIETY OF LONDON.

*Ordinary Meeting, June 9th, 1897.*

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HENRY T. BUTLIN, Esq., F.R.C.S., in the Chair.

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*Post-Mortem Specimens from a Case of Laryngectomy for Malignant Disease of the Cricoid.* Shown by Mr. G. SPENCER.

I complete the account of this case, which has previously been before the Society, because of the exceptional site of the disease, and also because the opinion is widely held that laryngectomy is seldom indicated. A single woman, aged forty-two, had worked for many years amongst steam and sometimes irritating vapours. Early in 1896 she suffered from her throat, and attended as an out-patient; but, growing worse, was admitted into the Westminster Hospital under Dr. Hall in August, 1896.

She was suffering from subglottic obstruction, due to thickening all round within the cricoid ring, which was covered by normal mucous

membrane free from ulceration. She grew worse during the month, and finally I was called upon to do tracheotomy for an urgent attack of dyspnœa. A week later the cricoid ring below the cords was cleared of all growth through the tracheotomy wound, and a microscopic examination showed that every piece consisted of a malignant growth, which we called sarcoma.

The disease progressed rapidly, and we advised laryngectomy as the best palliative treatment. The whole larynx was removed, the trachea cut across at the third ring and stitched to the lower end of the incision, and the wound sewn up in stages. The patient swallowed easily from the first, but after the removal of the sutures a little leakage occurred just below the hyoid bone, and a very small channel remained, through which saliva sometimes came. She improved much in health, and was able to converse freely in a hoarse whisper, and sometimes in a distinctly marked guttural but articular voice. About three months after the operation there appeared induration in the neck. During the last month her pulse quickened, there was some cough and expectoration of mucus and she became cyanosed. At night she had some attacks of difficult breathing, but after inhaling oxygen she used to go to sleep. She died quietly four months after the operation without any asphyxial struggles. Meanwhile there was no difficulty in swallowing, nor other of those distressing conditions seen towards the end of a case of malignant disease of the larynx where tracheotomy only has been done.

At the *post-mortem* the lungs were found to be thickly studded by the growth. There were also some nodules in the liver, together with infiltration of the deep structures in the neck, including the thyroid gland and the mediastinum.

The œsophagus forms a normal unstricted channel continuous with the pharynx; just below the hyoid bone is a pouch lined by normal mucous membrane, but from which there was a small fistula opening on the skin. The upper end of the trachea was firmly united to the skin in the root of the neck, but was free from all compression.

I also show five microscopic specimens, one made for diagnosis, one from material removed at the operation, and three *post-mortem* specimens from the neck, lung, and liver. In my account of the case I gave my opinion that the case was a perichondral sarcoma of the cricoid, and in this my colleague Dr. Hebb, who made the specimens, concurs.

The Morbid Growths Committee, however, reported that it was a carcinoma. The growth is identically the same in all the microscopic sections which we have made. It is remarkable, if the growths originated from epithelial elements, that it should have extended outside the cricoid cartilage to the glands without causing any ulceration or alteration in the mucous membrane.

*A Microscopical Specimen of Acute Ulcerative Lacunar Tonsillitis.*

Shown by Mr. R. LAKE.

The patient, a young man of twenty-two years, was taken suddenly ill with sore throat on September 1st, 1896. On the 14th he went to a hospital, where he was treated until he came under my care, October 3rd.

The ulcer was situated on the right tonsil, and was of about the size of a shilling, and covered with a tenacious grey slough. I removed the tonsil, and after five days the patient was well.

The specimen shows large masses of beaded bacilli situated in the advancing edge of the slough; in the older slough they are more rare. This goes to disprove Moure's idea that the cause of the ulceration was chiefly due to pressure of retained secretion, and not to micro-organisms.

*Two Cases of Cleft Palate with Enlarged Tonsils, Hypertrophied Inferior Turbinates, and Excessive Quantity of Adenoid Growths.*  
Shown by Dr. EDWARD LAW.

The patients—a girl fifteen and a boy thirteen—are sister and brother, and were both operated upon during infancy for harelip. They resemble in many respects the two cases brought before the Society by me on February 10th of this year. There is no complaint made of regurgitation, difficulty in swallowing, or deafness; and the only symptom causing discomfort is that the power of distinct articulate speech is most seriously impaired in both instances.

A broad cleft is seen in the middle line passing through the hard and soft palates. The tonsils are enlarged, long, and somewhat flattened with the uvula above them; the inferior turbinates are greatly hypertrophied, and the defective nasal septa are seen passing backwards to the posterior pharyngeal wall above, and, as it were, through the adenoid masses.

The cases are shown because such conditions have not been very carefully described in the chapters devoted to this subject in most surgical works, and in order to invite the opinion of members in reference to operative treatment.

Such congenital cases differ widely from acquired ones, as there is no normal function to be restored, the patient having never acquired the faculty of perfect articulation. The gap is an arrest in formation, not simply a hole or the want of union of a fissure, and there is not the same abundance of yielding tissue to draw upon as in harelip operations. These considerations account for the patient being so often terribly disappointed with the result of surgical interference. Is it possible that the gap will be closed in either of these cases by means of an operation?

If so, will the result be more than a surgical success, simply closing the cleft by means of a tense and rigid bridge, which in no way improves the imperfect speech (the only relief desired by the patient), and probably complicating the employment of suitable obturators and artificial vela. Much weight is attached by both Kingsley and Essig to the unsatisfactory conditions for prosthetic procedures, which may follow upon unsuccessful or only partially successful operations.

If no operation be attempted to close the clefts, is it desirable to remove the tonsils and adenoids before handing the patients over to the dental surgeons?

Mr. SPENCER thought the case of the boy favourable for operation because good flaps could be made, and then the child could train himself, and not wear an obturator all his life. He should remove the adenoids

after the cleft palate operation. The case of the girl was less favourable because good flaps could not be obtained, and she was anæmic, and probably the dentist would do most for her.

Dr. SPICER suggested the removal of adenoids and nasal obstruction first of all, so as to eliminate the pressure on the palate due to buccal respiration if the reverse order was followed.

Dr. GRANT had known marked improvement in these cases after removal of the excessive nasal mucous membrane.

Mr. BUTLIN advised removal of the adenoids first, and then operate for the cleft palates, but he considered the cases unfavourable ones.

*Case of Cystic Tumour in Naso-Pharynx of a Man.* Shown by Dr. BOND.

Patient, a man, aged forty-five, came to the hospital with throat trouble. On examination, a round, yellowish tumour, with small vessels ramifying on it, is seen springing from roof, posterior wall, and left side of naso-pharynx. Probably is a cyst of Luscha's tonsil.

Dr. WAGGETT asked for a microscopic specimen when it was removed.

*Case of Hypertrophic Laryngitis following a Membranous Laryngitis of Unusual Character.* Shown by Dr. BOND.

The interest of the case consists in the fact that no Klebs-Loeffler bacillus was found, but the *bacillus pyocyaneus*.

The patient, a man, aged twenty-eight, was seen early in March for loss of voice and sore throat. His temperature was 100°, and later 101°. The base of epiglottis, the ventricular bands, cords, and outer arytenoid space were covered with a greyish white membrane. On several occasions he brought up masses of this. They were examined on two occasions by the Clinical Research Association, who did not find either time any Klebs-Loeffler bacillus. After many culture tests they isolated a bacillus which they considered to answer to the description given to the *bacillus pyocyaneus*. They state that they investigated some eighteen months ago an epidemic of membranous pharyngo-laryngitis in pigs in which the same bacillus occurred, and that they were led to believe that the organism bore a distinct causal relationship to the disease.

*Recurrent Laryngeal Growth.* Shown by Dr. BOND.

The patient, a housewife, aged twenty-seven, has had a growth removed from the larynx at least four times in the last two years. The last operation was three weeks ago, and at present there is no sign of recurrence. The growth removed was dark, three-lobed, smooth, and sprang from the very bottom and posterior part of the left ventricular band, and it hung down between the cords, and was as large as a couple of small peas. It did not at all look like a papilloma, and on section it seems to be an epithelial growth of unusual character. Dr. Bond asked that it might be reported on by the Morbid Growths Committee, to which request the sanction of the Society was given.

*Syringomyelia, with Paresis of the Left Half of the Soft Palate and Abductor Paralysis of the Left Vocal Cord.* Shown by Dr. JOBSON HORNE.

The patient, a married woman, aged thirty-one, was first seen in May, 1896, by Dr. Batten. For about six months previously she had experienced weakness of the hands, associated with tingling sensation, and had had difficulty in doing her hair.

She had been married three years, but there had been no child and no miscarriages. Seven years ago she had had a "diphtheritic" sore throat.

Dr. BATTEN noted muscular atrophy about the small muscles of the hands, but more particularly of the thumb of the left hand, producing the *main en griffe*; the forearm was well developed, the biceps and triceps were normal; the left deltoid was weak but not obviously atrophied, the trapezii were normal; the gait was natural; the knee-jerks were exaggerated, but no "ankle clonus" was present.

There was some ptosis of the left eyelid; this had been present from birth. Nystagmus, of a rotatory character, was noted in both eyes, more marked in the left than in the right, and increased on lateral deviation. The ophthalmoscopic examination was negative. The muscles of the face acted naturally.

The tactile sensation was perfect. The thermic sensation was impaired over both upper extremities and across the shoulder girdle; sensation to pain was impaired over the left shoulder, and probably over the whole of the area impaired to heat and cold, but to a less extent. The electrical examination showed no reaction of degeneration.

The features of special interest which led Dr. Horne to show the case were paresis of the left half of the soft palate and abductor paralysis of the left vocal cord; no sensory paralysis of these parts had been made out. The muscles of the tongue acted well, and the sense of taste was normal.

Dr. HORNE drew attention to the rhythmical oscillations of the tissues covering the fixed arytenoid, occurring during respiration, and ceasing on phonation. To apply the term nystagmus to these clonic rhythmical spasms he thought might be introducing a possible element of confusion; and the movements were too regular to be described as choreic. He attributed the oscillations to a lack of muscular tone and co-ordination in the motor apparatus. Dr. Horne commented upon the complete absence of interference with respiration and phonation, and regarded the case as a clinical instance of unilateral abductor paralysis, existing without giving rise to symptoms; and he thought that this clinical fact—or, rather, a lack of recognition of it—might perhaps account for the little mention made of laryngeal palsies in connection with these cases.

The general health of the patient had been well maintained. Massage had been used, and had done good. At first iodide of potassium was prescribed, but on account of depression had to be stopped; latterly strychnine had been given, and more recently iodide of potassium with strychnine. But whether the drugs had materially influenced the progress of the disease it was difficult to say; the stress of the disease had

fallen upon the left side of the body, and the condition had not materially changed during the past twelve months.

Dr. DE HAVILLAND HALL said the case was a good illustration of the value of laryngoscopic examination where no symptoms were present which would naturally lead one to investigate the larynx. He considered such cases very rare, but in one which he had seen there was paralysis of the trapezius muscle.

Dr. SEMON mentioned that a case of similar nature had been previously shown before the Society, but not under the same heading. The great interest in the case was the absolute absence of symptoms, *e.g.*, dyspnoea and monotonous voice. The oscillatory movement of the left arytenoid cartilage was of a choreic type.

Dr. SPICER thought the movements of the eye and palate were synchronous.

Dr. LACK pointed out that the similar case he had shown had crises, with half paralysis of the palate and double abductor paralysis of the larynx.

Dr. JOBSON HORNE said there was no paralysis of the trapezii in his case, and there were no crises.

*Cancer of Œsophagus and Trachea, causing Obstruction of the Trachea and Bilateral Paralysis of the Vocal Cords.*

Dr. CLIFFORD BEALE showed the œsophagus, trachea, and larynx from a male patient, aged fifty-five, who in May last was suffering from persistent cough, continued slight hæmoptysis, dysphagia, hoarseness, loss of flesh, and night sweating. These symptoms had been increasing for the four previous months. No evidence of tubercular disease could be found; the larynx was healthy as regards its mucous surface, but the vocal cords were absolutely fixed in the cadaveric position. The glottis was sufficiently wide for ordinary respiration, but some obstruction evidently existed in the lower part of the trachea. On attempting to swallow liquids the patient was unable to prevent leakage into the larynx and consequent cough; but he could swallow solids fairly well, although complaining of obstruction referred to the level of the sternal notch. A tube passed into the œsophagus with the double object of exploration and feeding was stopped at about eleven inches from the teeth, and a little food passed through it was regurgitated. No pressure was used to overcome the obstruction. The patient gradually sank from exhaustion and increasing congestion of the lungs, but was able to take a fair amount of food. The respiration was never accelerated, remaining at about 18, but each inspiration was attended with stridor. On examination an epitheliomatous growth was found involving the œsophagus and the lower end of the trachea and all the bronchial glands. The trunk of the vagus nerve on the right side was lost in the growth, and the recurrent laryngeal nerve on the left side was also involved. The growth projected into the trachea, and a tortuous channel through it was found to connect the œsophagus and trachea. On the œsophageal side the growth itself was hollowed out to form a pouch, but there was no dilatation of the gullet above the growth. This case illustrates very well the

uselessness of tracheotomy where a double obstruction exists, and also the danger of the œsophageal bougie where the obstruction is attended with hæmorrhage. The least force applied in this case must have inevitably torn through the soft and vascular growth, and so have accelerated the death of the patient.

In connection with Dr. Clifford Beale's case, Dr. BOND referred to a case of double abductor paresis with a tumour of tongue, and the history of syphilis and a stab in right neck, which was recently shown for him to the Society by Dr. StClair Thomson. The patient has died since he was shown. The lingual growth was found to be epithelioma. The double paresis was due to the right recurrent having been cut, and the left pressed on by an enlarged gland.

*Unilateral Paralysis with Displacement of Arytenoid and Dyspnoea.*  
Shown by Mr. WAGGETT.

A case of recurrent nerve paralysis on the left side, occurring in a young woman of twenty-two, and dating from infancy.

She complains of attacks of dyspnoea, which lately have become more severe and persistent. No tracheal stenosis or serious lung disease is present, though the chest is deformed, owing probably to the prolonged presence of enlarged tonsils, which were removed three years ago. The left vocal cord remains motionless in the cadaveric position, and the right cord does not pass the mid-line on attempted phonation, which results in a forced whisper. The paralyzed cord is extremely short, and the left arytenoid is considerably displaced inwards and forwards, and at first sight has much of the appearance of a growth overhanging the rima glottidis. The tissues over the arytenoid appear to swell occasionally and cause dyspnoea, but the latter is absent at the present time. The early onset of the loss of voice, together with the history (and evidences) of tubercular abscesses in the neck in infancy, suggest involvement of the recurrent nerve in diseased mediastinal glands as the probable cause of the paralysis.

Dr. DUNDAS GRANT thought there was paresis of half the palate and the tongue, and the depression of the palate was most marked on the right side, and therefore the lesion seemed to be a central one. There was also no sight in the left eye, besides evidence of retinal changes.

*Hypertrophic Laryngitis with Atrophic Rhinitis and Pharyngitis, consequent on an Attack of Typhoid Fever and Diphtheria.* Shown by Dr. STCLAIR THOMSON.

Two years ago the patient, a man aged forty, left a hospital after an attack of typhoid fever in the course of which he had the misfortune to contract diphtheria. During this he reports that fluids regurgitated through his nose, and the hospital notes—which are not very definite—report that there was “partial anæsthesia of palate; thickening of epiglottic and vocal cords, and the right cord moves with greater freedom than the left.” Since that time he has had offensive scabs from the nose, and the voice, which at first was only a whisper, has become stronger,

but has remained gruff. The voice becomes worse and the throat gets dry after use.

The vocal cords move freely. There is hypertrophy of the arytenoid region and of the ventricular bands, and slightly in front of each processus vocalis there is a red, hypertrophied spot. Part of the epiglottis and uvula has disappeared, and there is an atrophic and cicatricial condition of the pharynx and nose.

The case is presented to illustrate the damage which may be left in the naso-pharynx by diphtheria—or typhoid—the consequent laryngeal mischief, and the benefit which may accrue to the latter by treating the nose and pharynx. This patient has only had the latter attended to, and his larynx has improved considerably, although he has continued at work as a shopman.

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## THE NEW YORK ACADEMY OF MEDICINE.

*April 28th, 1897.*

(Abstracted from "Laryngoscope," June, 1897.)

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*President*—Dr. J. W. GLEITSMANN.

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### SECTION OF LARYNGOLOGY AND RHINOLOGY.

#### *Case of Obscure Laryngeal Disease.* Dr. W. C. PHILLIPS.

This case was shown a year previous; the patient was then twenty-six, had been hoarse for ten years, and had lost his voice for one year. There was destruction of the anterior part of the septum nasi, and much nasal ulceration; the nasal deformity dated back twenty years. In the larynx there was infiltration involving both cords and ventricular bands and the interarytenoid space, and considerable ulceration on the right side. No history of syphilis or tubercle, and no good results had followed the exhibition of mercury and iodide of potash. At present there was, besides the previous lesions, a deep fissure in the epiglottis.

Dr. SOLIS COHEN (Philadelphia) suggested lupus as the cause.

Dr. NEWCOMB had met with a similar case which had proven specific.

Dr. MAYER was not disposed to consider it lupus.

Dr. PHILLIPS, in reply, stated that he had previously believed it lupus, and still did, and expected eventually to be obliged to intubate.

#### *Frontal Sinus Disease.*

Dr. ROBERT C. MYLES showed two cases after operation by Luc's method, the relief being most marked in both cases. The patients were still wearing the rubber tubes into the nose.

Dr. CURTIS thought the opening rather abnormal, and asked how many cases Dr. Phillips had operated on.

Dr. PHILLIPS said he had operated on eleven patients, and that his cases were those where intranasal operation proved useless. He thought that very probably a larger silver tube might advantageously be substituted for the rubber one.

Dr. HARRIS spoke strongly in favour of the operation from practical experience.

*Specific Adhesions of the Soft Palate.* Shown by Dr. BERENS.

The palate was adherent to the pharyngeal wall, and he had operated three years previously by Nicols' method with very good result, the patient now being able to breathe through the nose, which had previously been impossible.

*Tumour of the Ventricle of Morgagni.* Shown by Dr. GLEITSMANN after operation.

This case had been presented before. The patient was now well, and the tumour showed tubercles, but no bacilli.

*Artificial Nasal Saddle* was shown by Dr. SOLIS COHEN.

The saddle was of platinum, and was to be introduced under the septum after Roose's operation. The nose was to be turned up and the parts exposed. The saddle was then to be introduced with the prongs fitting in the bone, passing under the mucous membrane. It was a very satisfactory instrument. There is some contraction of the nasal passages requiring the use of bougies almost constantly. The saddle must be introduced at once, as the swelling subsequent to the operation would interfere with that procedure.

Dr. CURTIS then demonstrated *Instruments* for the development of geometrical figures in sand and emery by means of singing the notes of the chromatic scale under stretched membranes, with photographs of the chromatic scale and pictures of intermediate tones.

DRS. MEYER, SOLIS COHEN, GOODWILLIE, MAYER, MYLES, QUINLAN, and GLEITSMANN joined in the discussion.

*The Influence of Adenoid Vegetations on the Growth and Configuration of the Upper Maxilla and Nasal Septum.* By Dr. J. W. GLEITSMANN.

Due attention had not been devoted to this subject, although American writers (Delavan) had referred to it as early as 1887. The speaker then detailed the history of a case in which the palate was V shaped—the teeth irregular. According to Koerner, two different conditions of maxilla have to be noticed dependent upon adenoids before and after second dentition. In the first instance the palate becomes elevated, the alveolar processes approach each other, but the teeth find their normal position. If the adenoids remain after the second dentition the malformation of the upper maxilla becomes exaggerated, assumes the V-shaped form, the teeth (especially the bicuspid) are crowded out of place, and may even be so displaced as not to meet. The maxilla in its turn affects the growing septum and causes it to deviate. All these defects are largely due to the loss of the supporting influence of the tongue as normally exerted in nasal breathers.

Dr. SOLIS COHEN said that most undoubtedly a high palate was present both in cases of deflected septum and adenoids.

Dr. GOODWILLIE referred to the anatomy of the mouth and the

influence of excessive alveolar development in the formation of high palates.

Drs. MAYER and MYLES spoke on the subject.

Dr. QUINLAN referred to the situation of deflections ; they occurred at the sutural line of the plates of the ethmoid and vomer, the weakest part of the triangular cartilage. Frequent traction of the buccinator forces the sides of the maxilla together and so pushes up the septum. He referred to thumb sucking, as also did Dr. Goodwillie.

Dr. GLEITSMANN briefly replied.

*R. Lake.*

## AMERICAN LARYNGOLOGICAL ASSOCIATION.

("Med. Rec.," May 22, 1897.)

(Continued from page 368.)

### *Second Day—Wednesday, May 5th.*

*Tumour of the Nose.* Dr. J. H. BRYAN (Washington) exhibited a case of *Intranasal Tumour*.

The patient was a man of twenty-two, who had had a growth in the nose, causing stenosis, for four years. It first appeared in the left anterior naris, but was now visible in the right posterior. As the septum was intact in the naso-pharynx, it was evident that the neoplasm had attacked and perforated the septum. An examination of a bit removed showed fibro-sarcoma, though from simple inspection he had made a diagnosis of simple fibroma. Within the past few weeks giddiness and double vision had appeared. There was no spontaneous hæmorrhage, but the growth bled freely upon manipulation. Dr. Bryan invited the opinion of those present as to the most feasible operation for removal.

Dr. M. R. WARD (Pittsburg) had operated in one case of fibro-sarcoma of the nose four years ago. His patient was well at the present time. In view of current views as to fibro-sarcoma, he thought that this long continuance of life somewhat invalidated the original diagnosis.

Dr. J. E. BOYLAN (Cincinnati) thought that mere continuance of life ought not of itself to invalidate the accuracy of diagnosis.

Dr. W. E. CASSELBERRY (Chicago) had reported a case of simple fibroma some eight years ago. It was impossible to remove the tumour entire, so he had slit it up into segments with the galvano-cautery knife, and then snared it off piecemeal. It was harder to the feel than was the growth in Dr. Bryan's case.

Dr. JONATHAN WRIGHT (Brooklyn) thought that the fact that in Dr. Bryan's case the naso-pharynx was not invaded would point to fibro-sarcoma rather than simple fibroma, which, confined to the middle or anterior part of the nose, was practically unknown.

Dr. J. SOLIS COHEN (Philadelphia) would advise, in the present case, the performance of Rouge's operation.

Dr. THOMAS HUEBARD (Toledo) thought that the eye symptoms in

the present case should suggest the query whether it was advisable to operate at all.

Dr. C. C. RICE (N.Y.) had seen one case during the last winter. He would strongly condemn cobbling in these cases.

Dr. J. N. MACKENZIE (Baltimore) said that the Rouge operation frequently failed to afford the necessary exposure of the involved area. He would therefore advise the modified Langenbeck operation, whereby the superior maxilla is separated from its median attachments and rotated outward.

*Suppuration of the Frontal Sinus.* Dr. J. H. BRYAN.

The writer thought that frontal sinus suppuration was much more common in this country than was generally supposed. Recent *grippe* epidemics had brought to light a large number of cases. Many were undoubtedly due to propagation from the maxillary sinus, owing, in some instances at least, to an abnormal communication between the two cavities. Phillibroun, of Boston, had recently reported the results of examination of skulls in which the infundibulum had been prolonged to the actual entrance of the antrum, as a half-tube terminating in a valve-like fold, so that secretions from the frontal sinus would pour into the antrum and secondarily involve the latter.

Dr. Bryan then described the anatomy of the frontal sinus, and exhibited photographs illustrating its peculiarities. He said that the size of the supraorbital ridges was no guide to the size of the sinuses. He would advocate in such cases the operation known as Luc's.

He then gave the clinical history of a case occurring in a woman, aged fifty-eight years, in which the Luc operation had been done. The antrum was also affected, and was previously operated upon by the alveolar method. After the operation the course had been uneventful for a while, but the drainage tube slipped out of the nose and soon evidences of sepsis began to show themselves. The dressing over the forehead wound was removed and a small abscess found. Pus was evacuated, and the wound was stuffed with gauze and allowed to heal by the open method.

Dr. CASSELBERRY was pleased to hear such strong advocacy of the Luc method. Intranasal management of these cases had in his hands proved very unsatisfactory.

Dr. MACKENZIE thought that strong antiseptic solutions should be carefully avoided in all such cases. It had been shown that bichloride solution as weak as 1 to 10,000 caused a necrosis of a thin layer of tissue. He would prefer Thompson's fluid as used in the bladder, or even a normal salt solution. The same thing could be said of drainage tubes. They should be avoided as much as possible, as they are liable to act as pus producers and carriers of infection.

Dr. WRIGHT thought antrum disease from sinus disease a very common sequence.

Dr. J. E. NICHOLS would agree with Dr. Mackenzie as to the danger of using strong solutions. He thought it possible to make a differential diagnosis between primary antral disease and that secondary to frontal

sinusitis. In the latter, the antral pus appeared as long worm-like shreds, while in the former it was compact or in small masses.

#### DISCUSSION ON ATROPHIC RHINITIS.

The nature and symptoms of this affection were considered by Dr. W. E. CASSELBERRY. No one theory of causation would account for all the cases observed. The disease as seen in the young child seemed to contravene Fraenkel's theory, which, however, was borne out by the appearances found in old people. There were fœtid and non-fœtid cases. The atrophy might be due to one cause and the fœtor to another. Two groups might be made—one of simple dry cases and the other of *ozæna* or fœtid cases, as had been done by Greville McDonald. All stages of atrophy were observed, from a very slight grade up to a condition characterized by degeneration of the mucous glands and crust formation. The non-fœtid variety occurred more frequently in old people. *Ozæna* was seen in early life, and as a rule the fœtor was persistent, but in some instances the two types seemed to blend. There might also be a local affection of the peripheral sensory nerves. The nostrils became less sensitive to all irritants and the pharyngeal reflexes were sluggish. In some cases the process seemed to involve the nasal bones and cartilages as well as the turbinates, so that there was a suggestion of the saddleback nose. The tip of the nose is elevated, so that the anterior nares look forward rather than downward. Again, there might be a primary central trophic neurosis. A deviated septum might cause the change to be more marked on the concave side, but a correction of this deformity would often cure the affected nostril. Congenital malformations seemed to be a causative factor in some cases. They led to atrophic rhinitis from poor nasal ventilation, and consequent stagnation of secretion. Syphilis, tubercles, alcohol, and gout undoubtedly played a predisposing part. In both types of the disease the trophic changes varied in degree and distribution. Some cases were undoubtedly the sequels of preceding hypertrophy, but hypertrophy need not exhaust itself before atrophy begins. The middle turbinate might be hypertrophied and the inferior atrophied. Grünwald had referred the condition to preceding sinus disease; Bosworth to an earlier purulent rhinitis. More recently Belfanto and Della Vedova had found in the mucosa bacilli resembling those of diphtheria; Fraenkel and Loewenberg, a coccus; Abel, a bacillus named by him *bacillus mucosus*; Wyatt Wingrave, various hyaloid bodies. As regarded symptoms, in addition to those referable to the nose proper, impaired hearing and voice were often the first things noticed. The speaker would advise against a too free use of the cautery in hypertrophic cases, as atrophy might thereby be induced.

Dr. J. N. MACKENZIE spoke of the pathology. In considering this topic one should consider, first, the nature of the structural changes; and, second, the order of their occurrence. It must be remembered also that we are dealing with changes in a respiratory organ as well as in a mucous membrane. At present there is a haze of opinion regarding the matter, because of the loose manner in which the term atrophy is used; and, second, because we fail to discriminate between the different forms

of atrophy, and the causes which produce them. We may have simple atrophy, and the atrophy of degeneration. The best term to indicate the condition we have in mind when we speak of atrophic rhinitis is sclerosis. This may result from a blood infection, such as tuberculosis or syphilis, or may come from an intoxication, particularly that of alcohol. It probably does not arise from purulent catarrh, for we have nothing parallel to such a sequence in any pathological process with which we are acquainted. The task of the future is to determine the origin of this sclerotic process. It is possible that the process may be sclerotic *ab initio*, and that it may begin in the periosteum. It is impossible to prove this. It is improbable from the lack of proof in clinical history, from the lack of anatomical observations on this point, and also from the fact that we frequently see a rapid transition in a given case from a hypertrophic to an atrophic condition.

In reply to Dr. Casselberry's objection to the theory of this transition, he would say that ozæna and atrophy are not convertible terms. In regard to the ozæna neonatorum, so-called, this might be due to intra-uterine changes with the nature of which we are unacquainted. It is true that hypertrophy does not always terminate in atrophy, and in a given microscopical section we may see the two side by side. Atrophy is, as a rule, more pronounced when the catarrh has originally developed.

Dr. C. C. RICE (New York) discussed the treatment. He would divide therapeutic measures into constitutional and local. Under the former he would include climate and general hygiene. He had seen several cases greatly improved by a transfer of residence from the city to the country. Sea air was undoubtedly better than mountain air. As to local measures, cleanliness and stimulation were probably the methods most generally employed. Great care should be taken to avoid destruction of tissue. The oily preparations were of great service, both as vehicles and as lubricants. He would therefore cleanse and polish the nose with the oils. In very young children with excess of thin secretion powders might be used.

Dr. JONATHAN WRIGHT called attention to the fact that the disease was far more common in women than in men, and that its development seemed coincident with the menopause. After the menopause the condition generally improved. It had been suggested that the bacteria found in the nose in this affection might produce some ptomain, which by continued action on the nasal mucosa produced eventually the condition with which we are all so familiar.

Dr. S. O. VAN DER POEL (New York) alluded to the serum therapy of Belfanto and Della Vedova. He had seen one subject of atrophic ozæna who contracted laryngeal diphtheria. Antitoxin was injected at three different times, and the patient recovered. It was a remarkable fact that thereafter the ozæna was also greatly improved, the amount of discharge having been most markedly lessened.

Dr. J. H. HARTMAN (Baltimore) had for some years used the galvanic current, and was disposed to attach great value to it. It was, however, a tedious method of treatment, and it was difficult to make patients persist in its use.

Dr. JAMES E. LOGAN (Kansas City) had found the middle turbinate more frequently atrophied than the inferior, and was disposed to attach much importance to pre-existing sinus disease as a causative factor.

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*Third Day—Thursday, May 6th.*

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*Simulated Sarcoma of the Tonsil, with Case.*

Dr. BRYSON DELAVAN (New York) reported a case of a man of forty-three years, with a good family history and no suspicion of syphilis. For two months he had had a soreness in the left tonsil, with a moderate enlargement of the same. Later there ensued a breaking down of the tissue, leaving a central erosion, while the remainder was indurated. The cervical glands below the tonsil were somewhat enlarged. There was pain on palpation and deglutition. The patient was placed on the iodide of potassium, while a small piece of the tonsil was removed and submitted to Dr. Hodenpyl for examination. Several other pathologists also examined the growth and pronounced it a sarcoma. Dr. Hodenpyl, however, was not sure of this, and was inclined to doubt the correctness of this view. The glandular enlargement cleared up under the iodide, while the tonsil still remained enlarged. It was removed with the cold snare. The microscope showed chronic hyperplastic changes, with a large number of endothelial cells. There was a strong suggestion, in the arrangement of the histological elements, of sarcoma; but the tonsil was only a little enlarged. Under the continued administration of the iodide the disease entirely disappeared, and the patient has remained well.

*A New Method of Permanent Relief of Certain Enlargements of the Turbinated Bones.*

Dr. DELAVAN also presented a short communication with this title. He said that the use of the cautery often produced too great loss of mucous membrane, while affording no permanent relief. Our aim should be to reduce the volume of the congested turbinates. He, therefore, would advocate the method of submucous incisions. For this purpose he used a small knife, first applying cocaine in the usual manner and then passing the blade under the mucosa, making a sweep through the submucous tissues and then withdrawing it, care being taken to avoid any additional enlargement of the original opening. The instrument employed was a needle rather than a knife. It was better to repeat the operation than to overdo it. There was but little pain and only slight bleeding. It was a good plan to keep the cocaine in contact with the tissues for several hours and to let the slight hæmorrhage stop of its own accord. This method of operating possessed the advantages of ease of execution, freedom from bad effects, preservation of the mucosa, and a practical adaptability to the desired end. In advocating this measure, Dr. Delavan would lay no claim to originality, though he had never heard it before described. As to its ultimate results he could not speak positively. He had one case now under observation, in which the good results had persisted to the present time and were all that could be desired.

Dr. WRIGHT thought that this was a very reasonable procedure. He presumed that the good effects were due to the breaking up of the vascular coats, and the causation of clotting in the cavernous tissue was analogous to what was sometimes sought to be brought about in cases of aneurism.

Dr. CASSELBERRY saw many cases in which the congestion was posterior. In such this operation would hardly do. He was willing to admit, however, that sometimes the removal of an anterior enlargement would cause a posterior one to disappear without further treatment. He also alluded to the method of submucous linear cauterization recently advocated by Norval H. Pierce, of Chicago.

Dr. WRIGHT said that the importance of Dr. Delavan's first case should not be overlooked.

*A Case of Subglottic Tumour causing Great Dyspnoea; Removal by Tracheotomy and Curetting.*

Dr. JOHN W. FARLOW (Boston) reported the case of a woman of thirty-seven years who four years before had suffered from severe dyspnoea. Three years ago she had come under the observation of Dr. H. W. Loeb (St. Louis), who found a thickening of the nasal septum. The dyspnoea was so severe that a tracheotomy was done, and it was found that there was a tumour, sessile, about one and one-eighth inches long, and three-eighths of an inch in transverse measurement, situated on the posterior wall of the trachea, and bulging into the œsophagus. It had the thickness of a pencil, and was of a brownish colour and soft consistency. After the tracheotomy the dyspnoea greatly improved, and she remained fairly well. She came under Dr. Farlow's observation in January, 1897. She then had dyspnoea and great wheezing in respiration. She had lost thirty pounds. The voice was not hoarse, and the vocal cords moved freely. There was a tumour visible below the cords, filling up the trachea to a great extent, so that there was only a very small passage for the tidal air. The tumour presented as two masses on the right side, and as a single one on the left, and was apparently connected with the trachea. A diagnosis of non-malignancy was made, and the growth was regarded as an enchondroma. On February 4th a tracheotomy was done, and the trachea opened above. Free access to the tumour was thus obtained, and it was removed with the curette. In closing the wound the skin was sutured, while the tracheal rings were not. Examination of the growth showed it to be a fibroma. Dr. Farlow alluded to the possibility of some relation existing between the thickened septum and the tracheal growth.

*Papillary Œdematous Nasal Polyphi and their Relation to Adenomata.*

Dr. JONATHAN WRIGHT (Brooklyn) discussed a series of tumours, some of which had come under his own observation, and others of which had been reported by writers. Full details of histological structure were given, and the general aim of the paper was to show that all grades of transition could be seen, from the simple nasal polyp up to the true adenomata.

*A Case of Adeno-Carcinoma of the Nose* was reported by Dr. F. E. HOPKINS (Springfield, Mass.).

His patient was a man of eighty-three years. For twelve years he had had nasal obstruction with a watery discharge, but no pain or bleeding. A tumour was discovered in the nose, and a rough attempt at removal was made. The attempt had to be given up on account of the hæmorrhage it caused. Later, some masses were removed by the forceps. These were regarded as polypi. He was seen by Dr. Hopkins in April of the present year. He was now suffering from a sanious discharge, occasional epistaxis, and offensive odour. The eye was displaced outward. The septum nasi was forced over to the right side posteriorly. The mass was removed with the cold wire snare. Bleeding was profuse. The microscope showed cylindrical cells in tubular arrangement, but here and there arranged as acini. There were a few irregular cell masses. In general, it could be said that there was a tendency to a concentric arrangement. The amount of connective tissue was scanty.

Dr. SWAIN (New Haven) called attention to the similarity of structure between the papillary adenomata seen in the nose and that of the ordinary aural polyp. He believed that the fibrous tissue present in these growths, as well as the cell elements, contributed to the papillary appearance.

*Primary Lupus of the Larynx.*

Dr. EMIL MAYER (New York) reported two cases that had been under his observation.

Case 1. Male, aged thirty; born in Russia; presented himself for observation on July 18th, 1896. His history was that he had been in good physical condition, excepting an attack of malaria seven years ago, until one year before the date of presentation. At that time, after a very short cough, he brought up about a wineglassful of blood. There were no further signs of hæmorrhage until July 10th, 1896. While sitting up at night he had a short cough, and brought up half a cupful of blood. From this time he had daily hæmorrhages until he presented himself. During this time he was under the care of his family physician. There was no cough, no pain in deglutition, no pyrexia, no hoarseness. His physician, finding no evidence of pulmonary disease, referred him for laryngoscopic examination. There was a large ulcer in the centre of the epiglottis, extending over the entire laryngeal face. The edges of the ulcer were granular, covered with a greyish white deposit, many small nodules existing on the free edge, the whole presenting a gnawed appearance. The width of the ulcer at the upper border was about eight millimètres. In the deepest portion of the ulcerated surface there was an eroded spot, presenting the appearance of the open mouth of a vessel. There was a tumefaction on the upper border of the epiglottis on each side of the ulcer. The arytenoids and the interior of the larynx were normal. Careful examination and investigation gave no evidence of syphilis. Sputum examined showed no bacilli. There was a slight consolidation at the apex of the left lung.

Diagnosis: Primary lupus. Under applications of lactic acid,

alternating with menthol, and internal applications of creosote, he improved markedly, the hæmorrhage ceasing on the third day and never returning. His weight increased and he resumed his daily vocation, passing from observation August 5, 1896.

April 16, 1897, patient present at my urgent request. States that he has been entirely well these eight months past, that he has steadily gained in weight, and excepting a slight cough of a few days' standing has no complaints. His voice is clear and strong, appetite good; he has no pyrexia and no pain, and there is no difficulty in deglutition.

*Examination.*—The epiglottis is thickened in every diameter; a piece is excavated out of its central portion, extending to within one-eighth of an inch from its free border. The portion of the epiglottis that is visible in this excavation is nodulated in appearance, a fresh nodule being visible on the site of the old cicatrix. The mucous membrane of the border of the epiglottis adjacent to the ulcer is puffy and very œdematous. Its œdematous folds form pouches hanging over the arytenoids, and tend to obstruct the view of the larynx. No abnormality can be detected in the larynx.

*Examination of the Lungs.*—Besides a slight bronchial catarrh, and the consolidation at the apex of the right lung, which is *in statu quo*, there is no other pulmonary affection.

Case 2. This case was one of primary lupus of the pharynx and larynx, and was reported to this Association in the year 1881 by Dr. Morris J. Asch, through whose courtesy the patient has been under the observation of the writer ever since. The history then given was:—

Nora H. came to me in February, 1879, complaining of sore throat and hoarseness. For four years she has suffered with it during the winters. During the past winter she has been much worse, deglutition becoming difficult, fluids passing out through the nose on her attempting to swallow them. There was a pricking sensation in the parts.

*Examination.*—The uvula was destroyed. The free border of the velum and the posterior pillars were ulcerated; the anterior pillar of the right side, the right tonsil, and the roof of the mouth were thickened and covered with small fleshy tubercles and nodular masses. The anterior pillar of the left side was thickened, while the whole diseased surface presented a deeper tint than normal. On the posterior wall of the pharynx was a large radiated cicatrix, of the origin of which the patient could give no history. Patient is dysphonic; hearing is diminished. The epiglottis is thickened, with ulceration on the left side and with its cushion much infiltrated. The aryepiglottic folds and the ventricular bands are covered with small tubercles and thickened, so as to prevent a view of the vocal cords. There is also a large papillated mass at the base of the tongue on the right side.

Under cod-liver oil, iron, and applications of nitrate of silver the patient improved until October of that year, when she complained of a choking sensation in damp weather. There was pain in the throat. The growth had increased and there was an appearance of ulceration on the right side of the larynx. There was a white spot on the right posterior pillar, and the granulations, which had almost disappeared from the roof

of the mouth, had returned. Under applications of perchloride of iron the patient improved steadily, and in May, 1881, there were no further indications of active disease.

Two years after the case was described it was found that the epiglottis was sunken and flattened. This was believed to be due to subsequent cicatrization. About five years ago a new nodule appeared, extending from the centre of her distorted epiglottis and directly upon a cicatrized spot. This remains and protrudes like a spur. Before this an attack of pneumonia, and later an attack of pleurisy, occurred, from which recovery was complete. No other throat affections save those noted have presented in all these years. Her life history has been that she has been twice married. Her first husband died of endocarditis. She has been pregnant twelve times and aborted seven. The abortions were all due to causes referable to the uterus. The children that were born were normal in every respect. Her skin and body were carefully examined from time to time. Her teeth were singularly perfect, nor has there appeared any diseased state of the eyes, ears, or scalp. No mercurials or iodides have ever been given or required. In the month of February, 1896, she began to cough, and failed rapidly. Tubercle bacilli were found in large numbers, and cavities at the apices of both lungs. Under creosote and rest she improved sufficiently to go to Sullivan County, N.Y., on April 15, 1897. From time to time there appears over the right temple a lupus eruption, sometimes very red and at others almost gone.

The writer quoted from the literature of the subject, calling especial attention to the statements made that primary lupus of the larynx does not exist. The literature, however, contains fourteen other cases besides the ones here presented. These cases are all reported by competent observers, one of whom states that lupus may originate as a primary deposit in the mucous membrane without any external disease whatever. This is now established beyond all doubt. It was also shown that lupus is dependent upon the tubercle bacillus for its origin.

The most important point is the question of diagnosis. Lupus must be differentiated from tuberculosis, syphilis, carcinoma, and leprosy.

*Symptoms.*—Primary lupus produces no symptoms for a long time—often occasions no inconvenience; no fever; only after a time, and frequently after a long time, the voice becomes husky, and sometimes dyspnoea may occur, and these bring the patients under observation; hence Marty truthfully said that lupus of the larynx must often be divined. The glands may or may not be involved. Clinically speaking, the primary disease resembles the secondary in appearance. There are four processes in this affection: the mucous membrane is pale, it is œdematous, there is ulceration, and cicatrices form. These may all be present at the same time.

The course of the disease is chronic, without fever; a cure may be spontaneous, and often the disease reappears in the scar. The course of the disease may be rapid. Death ensues from complications, rarely from œdema of the glottis.

Prognosis is good as far as temporary recovery is concerned.

In regard to the cases here presented, the most important question

is that of diagnosis. In the first case there were no symptoms of a throat affection ; the epiglottis presented a worm-eaten appearance, with nodules. There were no bacilli and no cough, no fever, no evidence of syphilis ; and finally a subsequent cicatrization and formation of the nodule in the cicatrix led to the diagnosis of lupus.

In the second case the main point of interest is that at the time of its presentation the diagnosis of lupus was questioned, and it was declared to be syphilis. After careful observation for sixteen years, no evidence of syphilis presented in any way. The presence of a large nodule directly on the site of the old cicatrix and the eruption on the temple so absolutely excluded syphilis that the writer believes that the original diagnosis has been amply verified.

The writer's conclusions were :—1, That primary lupus of the larynx does exist ; 2, that it is a painless affection and may go on for years unnoticed ; 3, that tubercle bacilli are present in small numbers, although difficult to find ; 4, that its similarity to syphilis in appearance is greater than to that of tuberculosis ; 5, that the absence of adhesive bands is characteristic of lupus, while they were always present in late syphilis ; 6, that the prognosis as to life is reasonably good.

Dr. SWAIN related the history of one case. It occurred in a girl, who presented in the larynx old scar tissue, of the existence of which she was totally ignorant. Tuberculin was injected, and after each injection the scars took on a pinkish colour, though there was no adverse reaction and no therapeutic benefit from the tuberculin.

Dr. WRIGHT thought that it was difficult to draw any hard-and-fast line between lupus and tuberculosis. Cases seemed sometimes to run over from one to the other. Many cases at first supposed to be lupus would clear up under the iodide, thus showing their true specific nature. In one particular instance in which this was the case a few bacilli were found in the sputa, but later the case developed tuberculosis of the lungs and larynx and ran the usual fatal course. Such cases were regarded as cases of mixed infection, but the speaker was not a believer in the truth of this theory.

#### *A Contribution to the Study of Laryngeal Phthisis.*

Dr. T. MORRIS MURRAY (Washington) reviewed the various advances made in the treatment of this affection since the publication of a paper read by him in 1894. He called attention to the good effects of a digestive preparation called enzymol, which he had applied to the larynx for the purpose of digesting off the diseased tissue. In one instance the result had been quite remarkable. He advocated the use of creosote, which he regarded as a *sine qua non* in the therapeutics of this affection.

Dr. E. FLETCHER INGALS (Chicago) stated that he had given up the use of creosote itself, and had substituted therefor carbonate of creosote. It was much better borne than creosote, and the dose could be run up even to one drachm three times daily.

#### *Four Cases of Sarcoma of the Nasal Cavity.*

Dr. J. E. H. NICHOLS (New York) reported the cases, giving the clinical histories in detail.

The following papers were read by title :

- "The General Health and the Upper Respiratory Organs," by Dr. J. C. Mulhall, of St. Louis.
- "A Case of Angioma of the Tonsil, with Recurrence of the Same Three Years after Removal," by Dr. J. H. Hartman, of Baltimore.
- "The Advantage of Bromide of Ethyl in Adenoid Operations," by Dr. T. Melville Hardy, of Chicago.
- "Surgical Treatment of Acute Inflammation of the Tonsillar and Peritonsillar Regions," by Dr. H. L. Wagner, of San Francisco.  
*R. Lake.*

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### THE AUSTRIAN OTOLOGICAL SOCIETY.

*Meeting of the 27th April, 1897.*

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(Translated and Abstracted by Dr. DUNDAS GRANT. "Monats. für Ohrenheilk.," May, 1897.)

*(Continued.)*

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Dr. FERDINAND ALT. *A Case of Suppurative Median Otitis complicating Epidemic Cerebro-Spinal Meningitis.*

The patient was a boy aged fourteen, who had suffered from meningitis since the 19th March, the diagnosis having been confirmed by spinal puncture. On the twelfth day of the disease the patient complained of pain in the left ear, and the membrane was found to be red, swollen, and bulging, the details being invisible. It was impossible to carry out the paracentesis in such a way as to get absolutely pure pus for bacteriological examination on account of the excitable condition of the patient, so that this examination had to be postponed until spontaneous evacuation had taken place. In fresh stained preparations of the pus from the deeper part of the meatus, Dr. Arthur Schiff found along with other bacteria a large number of the intracellular diplococci, which give rise to epidemic cerebro-spinal meningitis, such as had been found two days previously in the nasal secretion. It was impossible to get pure cultures. The ordinary treatment for suppurative otitis was carried out, and after seventeen days complete healing of the membrane took place with recovery of normal hearing.

Prof. GRUBER stated that he had only seen one case of the same kind.

Prof. POLITZER considered it obvious that the microbes had found their way from the naso-pharynx.

Prof. POLITZER. *On Symmetrical Exostosis of the size of Hemp Seeds, situated at the Inner End of the Meatus.*

The patient was a man affected with catarrh of the middle ear, and at the inner end of the osseous meatus, close to the membrane of

Shrapnel, there were two whitish exostoses of the size of hemp seeds, which enclosed between them the short process of the malleus. These were first described by Moos, and are somewhat rarely observed. As a rule they are found in both ears. Prof. Politzer thinks that they arise in connection with the development of the temporal bone, as they are situated at the spots where the free ends of the tympanic ring may become attached to the squamous part of the temporal bone. It is somewhat surprising that in spite of the frequent investigation of skulls, these symmetrical exostoses are not observed in the macerated specimen. The question, therefore, has to be investigated as to whether they are genuine osseous growths or fibrous thickenings, and this can only be cleared up by the removal and microscopical examination of the small tumours.

Prof. GRUBER is of the opinion that this is a malformation by excess ; like the two extremities of the tympanic ring they are sometimes nearer and sometimes further apart, and they undergo no further growth.

Dr. KAUFMANN. *A Case of Atypical Radical Operation on the Mastoid Process.*

A man, aged thirty, was under treatment on account of chronic sup-puration of the left middle ear, with headache and vertigo. The meatus was found to be very narrow, and filled with pus, while in the deeper part nothing was visible but a mass of granulation. On the mastoid process there was an irregular granulating wound, which narrowed like a funnel in its depths, at the bottom of which rough bone was to be felt. At the operation there was found a sequestrum derived from the squamous portion of the temporal bone, with a part of the zygomatic process. Behind this the dura mater was exposed over a region of the size of a four-kreutzer-piece, covered with granulation, but otherwise normal. At the postero-superior part of the process there was an opening half a centimètre in diameter, out of which granulations extruded ; when these were scraped, bleeding took place from the transverse sinus, but it was easily checked by means of iodoform gauze. At another point further forward there was a third small opening, which led into the antrum and middle ear. The radical operation was carried out completely, and the after-course was normal and free from fever.

Dr. D. KAUFMANN. *The Effect of Paracentesis and Vaseline Injections in Cases of Plastic Median Otitis.*

With reference to a case of Dr. Alt's, in which this treatment had brought about considerable diminution of the distressing symptoms, the writer brought forward another case in which the effect was to make the subjective symptoms considerably worse. He held that in sclerosis of the middle ear, there was an affection of the bone which could not be influenced by suppuration of the mucous membrane, and that it was not a matter of indifference to set up suppuration. It was therefore not indicated to bring this about in cases of sclerotic process in the middle ear.

Dr. FERDINAND ALT held that it was not justifiable on account of this one case, in which treatment had been without result, to throw aside the method referred to. The treatment was free from danger, and if in only a small percentage of cases relief was obtained, it was a very great gain. It was a response to the demand that many writers of importance had made for a means of keeping up an artificial perforation in the membrane, they expecting considerable beneficial result from its attainment.

Dr. KAUFMANN held that the difficult part of the question was to discriminate between sclerosis and adhesive process in the middle ear.

Prof. GRUBER opposed Kaufmann's view that the osseous new growth in the labyrinth wall described by Politzer should be identified with sclerosis of the middle ear. He was of opinion that this process belonged to the group of hyperplastic inflammations of the middle ear, and he included among these all the chronic processes, including the circumscribed ones, in which there was no obvious exudation, but increased growth of tissue. This would include the osseous new growth described by Politzer, and so much the more because the mucous membrane on the labyrinth wall is at the same time a periosteum, inflammation of which may give rise to a new growth of bone. He did not think that Dr. Kaufmann had proved that paracentesis with subsequent injections was to be rejected. Dr. Kaufmann's case was different from that of Dr. Alt's, the former showing atrophy of the membrane, but the latter a thickening of the tissues, including that of the membrana tympani, such as to warrant the opinion that a perforation would be useful.

Prof. GRUBER. *Hyperostoses of the External Auditory Meatus.*

Prof. GRUBER showed two temporal bones presenting symmetrical hyperostoses of considerable size in both external meatuses. In one there was a husk of straw which had got wedged against the tympanic membrane, and had stuck there for many years. Prof. Gruber mentioned that some years ago he had had a very similar case, in which the husk had apparently stuck in the ear for seventeen years without giving rise to any symptoms. On its removal there was found a round perforation in the membrane of about one millimètre in diameter, which closed up later on.

DISCUSSION ON THE THERAPEUTICAL VALUE OF PEROXIDE OF HYDROGEN.

*Introduced by Prof. POLITZER.*

Prof. POLITZER began by saying that peroxide of hydrogen was discovered by Thenard in 1818, and its antiseptic properties were recognized in 1882 by Baldy, who recommended it for surgical use. The substance had up to the present been of little use in major surgery, and it was only within the last few years that Neudörfer had warmly recommended it as an antiseptic and hæmostatic. Bettmann introduced it, in 1885, in aural practice, and had found adherents among otologists such as Rohrer,

Bull, Dayton, and Lermoyez. Very recently Georges Gellé had made experimental and clinical investigations into its action, and had published a remarkable work upon it in the "Archives Internationales de Laryngologie, d'Otologie, et de Rhinologie," edited by Helme.

Solutions of peroxide of hydrogen as sold by druggists were of different degrees of concentration. In Vienna, the solutions were from three to six per cent. In Paris they contained ten to twelve volumes of peroxide of hydrogen. The reaction is acid in proportion to the amount of sulphuric acid contained. On account of the presence of acid the breaking up of the peroxide is prevented, but this rapidly takes place on the addition of alkaline liquids. It also takes place rapidly when it comes in contact with secretions, being accompanied by a violent development of gas, so that oxygen is liberated in the neighbourhood of the tissues irrigated with this fluid. This last effect probably explains the antiseptic action of the material. Under the action of light and air the fluid undergoes changes to a very slight extent, and very slowly. Only when injected into the veins is it poisonous, and it possesses antiseptic properties, although not to the same degree as perchloride of mercury. Prof. Politzer recommends its use, first, in *acute suppuration of the middle ear*; after syringing the meatus with warm sterilized water, he fills the passage with peroxide of hydrogen while the patient's head is bent to the opposite side, and inflation according to Prof. Politzer's method is practised, so that air is blown from the tympanum through the meatus, and the liquid finds its way into the tympanic cavity. This treatment may be employed soon after the appearance of the discharge. If no diminution of the secretion takes place within a few days resort should be had to boracic acid.

Second : in *chronic suppuration of the middle ear*, a rapid diminution of the secretion is sometimes observed after several days' use of peroxide of hydrogen, and in some cases complete disappearance of the same. On the other hand there is frequently no marked influence upon the suppurative process. At the same time the remedy is useful in this case, because all the parts irrigated by the fluid are cleaned and disinfected. He therefore recommends that in chronic suppuration of the middle ear, especially in the septic neglected forms, the treatment should be commenced with the use of peroxide of hydrogen, and that after several days of this the ordinary antiseptic treatment should be pursued. Prof. Politzer has found that the latter acts more quickly when it has been preceded by the use of peroxide of hydrogen for some days.

Third : the drug has proved itself of considerable value in those forms of *desquamative suppuration of the middle ear* in which masses of epidermis are heaped up in anfractuositities of the tympanic cavity, inaccessible to irrigation, and which therefore cannot be removed by means of ordinary syringing. Such epithelial concretions, which favour the occurrence of sepsis, as also the remains of cholesteatoma masses, are frequently brought to the surface during the rapid liberation of gas following the introduction of the peroxide, and in this way the deeper parts of the tympanic cavity are purified.

The hæmostatic properties of peroxide of hydrogen have been praised

by Neudörfer. They have been proved experimentally by Georges Gellé in his investigations on rabbits.

Prof. Politzer had employed the peroxide with good result in hæmorrhage following the removal of nasal polypi, intratympanic operations, or operations on the turbinated bodies.

Dr. POLLAK had obtained satisfactory results from the use of this remedy in attic suppuration treated by the conservative method, as well as in those cases of acute suppurations of the middle ear in which the perforation was at the tip of a teat-shaped projection at the posterior part of the tympanic membrane. In the latter case the remedy was poured into the external meatus after the latter had been carefully cleaned, and then coaxed into the tympanum by means of inflation while the head of the patient was bent to the side, or else it was injected in mass through the Eustachian tube.

Prof. URBANTSCHITSCH found this particular advantage in peroxide of hydrogen, that it was perfectly unirritating and readily checked hæmorrhage.

Dr. GOMPERTZ employed it with good result in operations on the naso-pharynx.

Dr. ALT said that peroxide had been in use for a considerable time in Prof. Gruber's clinic, especially in cases of chronic suppuration of the middle ear, on account of the easy but complete purification of the meatus and tympanic cavity which could be effected by its use.

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## CONGRESS DER DEUTSCHEN GESELLSCHAFT FÜR CHIRURGIE.

*Berlin, 21-24 April, 1897. ("Deutsche Med. Woch.," 6th May, 1897.)*

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KÖNIG (Berlin) showed a child who had been intubated for diphtheria in 1892, the tube being left in a long time. On removing it laryngotomy had to be performed, and a long flexible tracheal tube passed down to below the sternum. Attempts to remove this tube were always followed by suffocative attacks. The child was now practically cured, but four operations had been required. Coughing had helped to restore the trachea to its proper condition, and now breathing was free, but owing to destruction of mucous membrane in the larynx the voice remained hoarse.

KÖNIG, jun. (Berlin), showed five patients in whom old laryngeal and tracheal defects had been covered in. In two, with comparatively small defects, a skin and bone flap was cut out of the thyroid cartilage, a skin flap sewed on to the cartilage and healed. The other patients had larger defects. In one the infiltrated larynx had first to be opened and dilated with bougies, then later the defect covered in by several operations. In the fifth child the defect was too large to permit of the use of a flap of skin, periosteum, and bone; the trachea was therefore freed and drawn

up, and thereby the defect greatly reduced. The child is still under treatment.

GRAF (Berlin). *On the Radical Cure of Laryngeal Carcinoma by Extirpation.*

From 1883-1896 Von Bergmann has operated on forty-eight cases of malignant growth in the larynx, viz. : 47 times carcinoma, once malignant enchondroma. The operations were 28 total, 19 half, and 9 partial extirpations of the larynx. The patients were 42 men, 6 women ; ages from 31-72 years. Preliminary tracheotomy was always performed and a Hahn's canula introduced ; then followed laryngo-fissure to enable the exact extent of the growth to be determined. Much importance was always attached to the thorough shutting off of the wound from the trachea on the one hand and the pharynx on the other. The latter was procured in total extirpations by stitching the pharyngeal mucous membrane, turning over the epiglottis, fixing the trachea to the lower angle of the wound, and bringing forward two lateral skin-flaps : in partial extirpations of the larynx the same was secured by firm tampons in the wound. Since these procedures have been consistently carried out, there has been a marked diminution in the number of those dying from results of the operation. An artificial larynx was used only in cases (seven) in which whispered voice was insufficient for patient's needs.

Radically cured are two patients with complete extirpation (viz., seven and two and three-quarter years), and another operated last July still (April) remains well ; further, four cases of extirpation of half the larynx and four of partial extirpation. These figures prove extirpation of the larynx for malignant growths to be a perfectly justifiable operation. The best results are obtained from partial extirpation ; and, indeed, in proportion as the amount of larynx that requires removal diminishes, so do the results improve. Hence the immense importance of early recognition of the disease.

KRÖNLEIN (Zürich). *On Carcinoma of the Pharynx.*

The speaker had seen sixty-one cases of carcinoma of pharynx—one in fifteen of all carcinomata. Of the sixty-one cases, fifty-six were men, five women. They were always flat-celled epitheliomata. Their position is of the greatest importance.

Naso-pharyngeal carcinoma is extremely rare—much commoner is oro-pharyngeal carcinoma. These are found almost entirely in the sinus tonsillar. It is difficult to decide what is their real point of origin. Eighteen grew from the lateral pharyngeal wall, ten from the base of the tongue, two from the palate. They were almost always unilateral—a few were bilateral. These were cases either of contact carcinoma or else of carcinoma starting in the velum and spreading to both sides. Their course, if unoperated, is rapid,—on an average seven months. Laryngo-pharyngeal cases are also common. They are found mostly in the sinus pyriformis ; they also occur in the post-laryngeal space proper—where they are generally circular ; on the rest of the posterior pharyngeal wall they are much rarer. The favourite positions of these growths thus correspond exactly to the course taken by food, which supports Virchow's

theory that irritation is a factor in the causation of cancer. The laryngo-pharyngeal cancers run a rapid course.

A radical operation on naso-pharyngeal carcinoma has not yet been performed. The oro-pharyngeal cases are the most frequently operated on—generally by Von Langenbeck's temporary resection of the inferior maxilla.

The speaker had operated on fifteen cases, of which ten died of recurrence (average fifteen months from commencement of symptoms). In one patient a carcinoma appeared on the opposite side seven years after the operation. This was probably a second primary carcinoma. The patient died from it. Two are still alive—one with a recurrence.

In laryngo-pharyngeal cancers Krönlein performs lateral subhyoid pharyngotomy. The incision, starting from the anterior border of the sterno-mastoid, passes forwards beneath the hyoid bone, but must not cross the middle line. A surprisingly free view is thus obtained. Of eight cases operated on, six died from the operation, one from recurrence, one is still alive and well.

Of the sixty-one pharyngeal cancers only twenty-nine could be operated on; eleven died of the operation, two were cured, all the rest died from recurrence. The increase in life as compared with the unoperated cases amounted to an average of seven months. The operation is therefore justified.

KUSTER (Marburg) had once performed a circular resection of the pharynx. Thereupon followed such a severe stenosis that no nourishment could be taken. He therefore warned against any such operation. "Tamponade" of the larynx was to be recommended as preventing pneumonia.

KUTTNER (Tübingen). *On the Lymphatics of the Tongue, with special reference to the Spread of Lingual Carcinoma.*

Lymph from one side of the tongue flows away on both sides. The lymphatics form a network on the surface, cross the sides perpendicularly, then form a second network. The lymph channels run to the deep cervical and submaxillary glands; some, however, run directly to glands lying deep in the neck just above the sternum. From the posterior part of the tongue they run to glands about the carotid. The most important lymphatic glands of the tongue, then, are the deep cervical and the submaxillary. It is therefore necessary in every operation for lingual carcinoma to methodically clear out the whole of these, and that on both sides.

HEIDENHAIN (Greifswald): Carcinoma of the tongue is specially malignant, because the contractions of the lingual muscles are constantly pushing forward the infective matter.

RIEDEL (Jena) (1) reported the case of a child with *Congenital Cervical Fistula*. It was subject from birth to attacks of vomiting and fever. When about three years old it complained of pain in the ear. This passed off after four days' fever. Six months later a swelling appeared at the angle of the jaw. The fistula led into a deep sacculæ, which extended far into the middle ear. The whole fistula was as

thoroughly as possible dissected out, and since then the child has remained quite free from its peculiar attacks.

(2) R. then showed an *Iron-hard Growth in the Thyroid Gland*. This had arisen within eight weeks. As radical operation was impossible a piece was excised. Shortly the patient returned with the swelling as large as ever and suffering from severe dyspnœa. By a second operation the trachea was freed, and the dyspnœa relieved. Since then the swelling had diminished. This showed that it was not a tumour proper, but simply an inflammatory swelling.

SAMTER (Königsberg). *On the Operation for complicated Hare Lip.*

By splitting the cartilaginous nasal septum, S. had been able to bring the tip of the nose into the middle line.

H. JUL WOLFF (Berlin) said that the pre-maxillary must never be pushed back, as that produced an ugly falling down of the upper lip towards the lower jaw.

*Arthur J. Hutchison (Trans.).*

## GESELLSCHAFT DER AERZTE IN ZÜRICH.

13th February, 1897.

(From the "Correspondenzblatt für Schweizer-Aerzte," 15th June, 1897.)

(Translated and Abstracted by Dr. A. J. HUTCHISON.)

Dr. LAUBL. *On Suppuration in the Accessory Cavities of the Nose.*

Out of eighty-six cases of suppuration in the accessory nasal cavities which the author had had under observation during the last few years, seventy-five were suppuration of the antrum, seven of the frontal sinus, one of sphenoid sinus, and three of ethmoid cells. In seven cases more than one cavity was affected, viz., in one case five, in one case three, and in five cases two each.

This disease appears to be most frequently due to some of the infectious fevers, and specially to influenza, diphtheria, and pneumonia. Contrary to earlier opinions, E. Fränkel has shown that the cavities are not necessarily infected by the spreading of the inflammatory process from the nasal mucosa into them, but that they are often directly infected through the blood, without the nose proper being affected at all. The antrum is sometimes affected by bad teeth, but not so frequently as used to be thought. Although there is no lack of dental caries in Zürich, a direct connection between dental caries and antral empyema could not be established in more than four cases.

The most common complaints of patients are of unilateral nasal discharge, often with kakosmia, blocking of one side of the nose (due to hypertrophy of the inferior turbinal and to polypi). Then there are frequent complaints of nervous symptoms—neuralgia of the trigeminus, headaches, mental dulness. Other organs may be affected (one case of otitis media acuta, one case of paralysis of the nervus oculo-motorius,

o case of protrusio bulbi). Further, empyema was found in some cases accompanied by recurrent erysipelas, recurrent tonsillitis, and sykosis of the vestibulum nasi.

Turning now to a very important complication, viz., polypi, these were present eighteen times in fifty-four cases of chronic empyema (equal to thirty-five per cent.). It is therefore our duty in every case of nasal polypi to look out for an empyema: that, however, is not to say that accessory cavity suppurations are the only causes of polypi; of course, other inflammatory irritations of the nasal mucosa can produce them. They seem to be most frequently due to suppurations of the ethmoid cells, then antral empyema, and more seldom to affections of the frontal and sphenoid sinus. The author's three cases of ethmoid suppuration, and five of the seven multiple suppurations, were complicated with polypi.

Pus in the middle meatus generally comes from the antrum, the frontal sinus, or the anterior ethmoid cells; pus above the middle turbinal comes from the posterior ethmoid cells, or the sphenoid sinus. Often it is possible to make a sure diagnosis only *per exclusionem*, and it is best to begin by testing the antrum.

Puncture of the antrum is the surest method of diagnosing the presence of pus in it. This may be done through the natural ostium, or the so-called fontanelles in the middle meatus, or through the outer wall of the inferior meatus, immediately under the anterior end of the inferior turbinal. Having punctured in one of these positions, first try aspiration; if this does not succeed, owing to the thickness, etc., of the pus, next blow or syringe through the canula, observing carefully whether pus is thereby driven into the middle meatus. Transillumination and Fränkel's posture test aid in the diagnosis; indeed, if both these tests give positive results the diagnosis may be regarded as established.

Having excluded the antrum, we next make a more thorough examination of the nose by means of the specula recently introduced by Killian. With them the middle turbinal can be pressed aside either towards the septum or outwards, and thus in many cases the exact spot at which the pus appears can be seen. If the pus appears just at the anterior end of and below the middle turbinal, it probably comes from the frontal sinus; or if, after plugging this part with small tampons, the pus appears in smaller quantity and further back, it comes from the anterior ethmoidal cells; whereas if it appears in the olfactory slit, it comes from posterior ethmoid cells or from sphenoid sinus. These statements are unfortunately not invariably accurate, because in the first place the natural openings of the accessory cavities are liable to certain variations, and in the second the pus does not always make its exit through the natural opening—*e.g.*, pus from posterior may break through into anterior ethmoid cells, and thence escape into middle meatus, etc., etc. Further, more than one cavity may be diseased; thus frontal sinus and anterior ethmoid cells, sphenoid sinus and posterior ethmoid cells, tend to be affected together. In such a case the best thing to do is to remove part of the middle turbinate with Hartmann's chonchotome. Removal of the posterior half clears the way for probing or puncturing the sphenoid sinus, and removal of the anterior end often enables us to see the pus trickling from the

frontal sinus. Probing the frontal sinus is seldom possible, but after amputation of the anterior end of the middle turbinal it fortunately is seldom needed for diagnostic purposes. The position of pain, tenderness, etc., may help in the diagnosis of a frontal affection. Vohsen's method of illuminating the sinus is untrustworthy, but X-ray photographs will almost certainly in the future be of great use in diagnosis.

The greatest diagnostic difficulties are met with in connection with the ethmoid cells. Here two kinds of suppuration have to be considered. These are : (1) Open suppurations, in which the pus flows freely from the suppurating cell or cells ; (2) closed suppurations, in which, the natural exit being obliterated, the pus cannot escape, but accumulates inside the cells, expands them, and produces diseased conditions of the mucous membrane covering them. The first step towards diagnosing open suppuration consists in the free removal of the polypi and granulations that always accompany this condition. In doing this one often opens up bony cavities full of pus. The whole of the region of ethmoid cells must then be thoroughly and systematically gone over with the probe, following up, where possible, the stream of pus, searching for bare and rough bone. Great care must be taken not to break open healthy cells.

Still more difficulty attends the diagnosis of closed ethmoid suppuration. Its presence is suggested by marked changes in the mucous membrane of the middle turbinal, such as great hypertrophy, myxomatous degeneration, nasal polypi, also distension of the bone. All these changes, however, may be equally well produced by antral empyema. It therefore must always be first excluded. One should then proceed to open up the different cells by means of Killian's canulæ, and find which of them holds pus.

The *treatment of acute cases* generally consists in aiding the flow of pus through the natural openings by position, cocaine, and antipyretics. Such cases tend to heal of themselves. If necessary, an antral empyema may be syringed out either from the middle or from the inferior meatus. Of twenty-one acute antral and three acute frontal suppurations, all, except one frontal (who did not follow out the treatment) and one antral case, were cured by syringing from nose or alveolar process.

*Chronic Empyemata.* The first thing is to give free exit to pus by thorough removal of all polypi and granulations—perhaps amputation of the anterior end of the middle turbinal. By these means a frontal empyema may often be, if not cured, at least so much improved as to relieve the patient of all his troubles. In others, the frontal sinus must be opened externally, the whole anterior wall being removed and the mucous membrane thoroughly scraped away. At the same time the anterior ethmoid cells may often have to be opened into and scraped out through the same external opening.

Sphenoid empyema must likewise be freely opened into. Sometimes this can be done by passing a Hajek's hook through the natural opening and breaking away pieces of bone; other times, when the bone is necrotic, the anterior and inferior walls should be nipped away with Grünwald's special forceps.

Ethmoid suppurations may often be treated similarly, viz., the lower wall of the cells broken away by means of hook or forceps, so as to give free passage to the pus. In more extensive cases part or all of the middle turbinal may have first to be removed, and polypi and granulations cleared out before it is possible to get at the offending cells. Even then it is not always possible to cure ethmoid suppuration.

Of the three methods of opening the antrum of Highmore the simplest is the operation through the inferior meatus; its use, however, is limited to acute and sub-acute cases. The opening through the alveolus is comparatively simple, and in the majority of cases sufficient to cure even chronic empyema (forty-one cures out of fifty-four cases, *i.e.*, seventy-six per cent.). This method is therefore much to be preferred to the more serious operation through the fossa canina.

#### DISCUSSION.

Dr. LUNING: The operation through the canine fossa was the oldest surgical method of treating empyema of the antrum. Dr. L. had not experienced any of the disadvantages urged against it by specialists. Food, etc., did not enter the antrum through the hole. He always made the opening large enough to admit the point of the little finger, and so had often discovered sequestra, etc., which had maintained the suppuration.

Dr. HEGETSCHWEILER considered syphilis one of the causes of accessory cavity suppurations. Such cases required general treatment.

Dr. RITZMANN drew attention to Kuhnt's treatment of frontal empyema, *i.e.*, opening from without, and complete removal of the whole mucous membrane.

Dr. LAUBI, replying to Luning, said that he gave the preference to opening the antrum from the alveolar process, but by no means rejected the operation through the canine fossa. The latter was required in many cases, and the opening ought to be large, because obturators were very uncomfortable. But he objected to subjecting every patient to so severe an operation when seventy-five per cent. could be cured by the much simpler alveolar opening. In reply to Dr. Ritzmann, he said that he knew Prof. Kuhnt's work well, but that in treating frontal empyema there were two different objects in view: first, to prevent the retention of pus; second, to stop the formation of pus. In many cases the former was all that need be attempted, as thereby all the patient's troubles were removed, and this could often be accomplished by endonasal treatment.

*Arthur J. Hutchison (Trans.).*

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## Editorial.

### REMARKS ON TUNING-FORK TESTS.

DR. HARRIS (Brooklyn) has in a recent number of the "Archives of Otology" (Vol. XXVI., No. 1) published the results of the laborious in-

vestigation of over sixteen hundred cases with Hartmann's series of five tuning-forks for air and bone conduction. In an abstract (p. 405 of the last number of the JOURNAL OF LARYNGOLOGY) we gave a summary of his conclusions, which embody many points of practical value; and a few comments on these may not be out of place, even if they add very little to what Dr. Harris has stated, and are in the main confirmatory of his opinions.

The occurrence of diminution of "bone conduction" for the higher tones in acute affections of the sound-conducting apparatus, including furuncle of the external meatus, must have been noticed by all careful observers. Dr. Harris attributes it to a secondary or simultaneous affection of the internal ear. This is, no doubt, the true interpretation in a large number of cases as far as our clinical judgment is to be trusted. At the same time the present writer has always been impressed with the possibility of an easily understood fallacy, namely, difficulty in excluding the influence of air conduction when using high-pitched tuning-forks for bone conduction in case of a normal ear. This makes the audibility by bone conduction appear much longer than it really is, and the standard thus obtained as the normal is much too high. With such a standard we may find an apparent diminution of bone conduction to a greater extent than really exists in cases where there is simply an impediment to air conduction. We should therefore attach little importance to the results of tests with high-pitched forks by bone conduction.

Rinné's experiment is, according to Dr. Harris, of doubtful value in diseases of the middle ear except in cases of excessively poor hearing. This is true of Rinné's test in the strict sense, but if we take the difference between air and bone conduction and accept a well-marked shortening of the positive Rinné as evidence of a disturbance of this, we have a test of some value as an indication of disease of the middle ear, even when the hearing is not excessively poor. We must use Rinné's test with judgment and not expect too much from it, remembering the fallacies which surround it. In particular, in unilateral deafness a negative Rinné does not of itself indicate an affection of the conducting apparatus, unless at the same time Weber's test is positive, the tuning-fork on the vertex being heard best in the affected ear. We may almost go to the length of saying that in cases of unilateral deafness Rinné's test may be omitted. Again, the presence of increased fatigability of the auditory nerve may produce an apparently positive or negative Rinné according as the fork is first placed on the mastoid or opposite the meatus.

A large number of cases give somewhat anomalous results, which we have been accustomed to explain, in agreement with Dr. Harris, by simultaneous involvement of the middle and internal ear. Pathology demonstrates this occurrence, analogy would suggest the possibility, and the results of tuning-fork tests can in many cases be explained by this and by no other assumption.

On the whole this series of observations ranks worthily as a solid addition to the semiology of diseases of the ear. In regard to tuning-fork tests in general, for air conduction we may depend chiefly on a low fork (C—128) and a high one (C<sup>4</sup>—2048): but for bone conduction by

Schwabach's, Rinné's, and Weber's tests, a medium one (C'-256 to C''-512). If we pick out from Dr. Harris's observations those only which were made with these forks, we find that they tally extremely well with those we are accustomed to obtain and to record. The addition of the deeper toned forks (C, C—, C--<sub>2</sub>) for air conduction enables us to obtain very valuable and almost indispensable information in many doubtful cases.

Dundas Grant.

## JUBILEE HONOURS.

It is exceedingly gratifying to see the names of several of our leading physicians and surgeons in the list of Jubilee Honours, and the official intimation of the knighthood conferred upon FELIX SEMON, Esq., M.D., is of special interest to laryngologists. His work is so well known to all engaged in this special department, that it is quite unnecessary in our journal to refer to his career in detail. It is sufficient to say that his labours in clinical and pathological research, as well as literature, have received deserved recognition in the scientific world, and he has already received many state and professional honours both here and on the Continent.

While congratulating Sir FELIX SEMON, as we heartily do, on this latest recognition of his work, we would add the conferring of such an honour upon him may also be considered an appropriate recognition of a branch of medical science which has had its origin and attained its present important position during Her Majesty's reign.

## ABSTRACTS.

### DIPHTHERIA, &C.

Brown, Dillon (New York).—*Antitoxin in the Treatment of Laryngeal Diphtheria: an Analysis of 991 Cases of Laryngeal Diphtheria under Personal Observation.* "Med. Fortnightly," May 15, 1897.

Dr. DILLON gives a tabular list of his cases, with notes.

#### INTUBATION CASES.

|        |                       |           | Number. |            | Recovered.          |
|--------|-----------------------|-----------|---------|------------|---------------------|
| July,  | 1885, to Sept., 1886, | 37        | .....   | 7 or 18·9  | per cent.           |
| Sept., | 1886, ,,              | 1887, 65  | .....   | 15 or 23·0 | ,,                  |
| ,,     | 1887, ,,              | 1888, 89  | .....   | 28 or 31·4 | ,,                  |
| ,,     | 1888, ,,              | 1889, 95  | .....   | 31 or 32·6 | ,,                  |
| ,,     | 1889, ,,              | 1890, 63  | .....   | 19 or 30·1 | ,,                  |
| ,,     | 1890, ,,              | 1891, 63  | .....   | 23 or 36·5 | ,, Began here with  |
| ,,     | 1891, ,,              | 1892, 117 | .....   | 40 or 34·1 | ,, calomel sublima- |
| ,,     | 1892, ,,              | 1893, 84  | .....   | 32 or 38·0 | ,, tions.           |

|                              |     | Number. | Recovered.  |                   |
|------------------------------|-----|---------|-------------|-------------------|
| Sept., 1893, to Sept., 1894, | 76  | .....   | 29 or 38·1  | per cent.         |
| „ 1894, „ 1895,              | 57  | .....   | 25 or 43·8  | „ Began here with |
| „ 1895, „ 1896,              | 30  | .....   | 17 or 56·6  | „ antitoxin.      |
| „ 1896, to April, 1897,      | 20  | .....   | 18 or 90·0  | „                 |
| Total,                       | 796 |         | 284 or 35·6 | „                 |

September, 1894, to September, 1895—

13 cases with antitoxin, and 5 or 38·4 per cent. recovered.

44 cases without antitoxin, and 20 or 45·4 per cent. recovered.

September, 1895, to September, 1896—

27 cases with antitoxin, and 17 or 62·9 per cent. recovered.

3 cases without antitoxin, and 0 or 0 per cent. recovered.

September, 1896, to April 1st, 1897—

19 cases with antitoxin, and 18 or 94·7 per cent. recovered.

1 case without antitoxin, and 0 or 0 per cent. recovered.

The effect of calomel sublimations is also given—

48 intubations; no antitoxin; 20 or 41·7 per cent. recovered.

59 intubations; antitoxin; 40 or 67·8 per cent. recovered.

9 no intubations; no antitoxin; all recovered.

18 no intubations; antitoxin; all recovered.

5 died before my arrival.

4 refused operation and died.

5 died of sepsis with only slight obstruction.

It is interesting to note the steady improvement in results as our knowledge of the technique of intubation increased, and as we learned from experience to overcome, with greater success, the dangers and accidents of intubation. The marked improvement after calomel sublimations were used, and the still greater success after antitoxin, is noteworthy. This benefit is seen not only in the larger number of recoveries after operation, but in the increased percentage of cases which recovered without an operation. Thus, of

492 cases; no sublimations; 50 recovered without operation, or 10·1 per cent.

340 „ with „ 45 „ „ „ „ 13·2 „

77 „ with antitoxin; 18 „ „ „ „ 23·3 „

Of course even this under estimates the good results, for the percentage of cases under calomel sublimations or the antitoxin treatment which recover without operation is very much larger. Since the introduction of antitoxin many cases recover, and are never seen by the consultant, which in former years would have undoubtedly come under his notice.

The apparently bad results after the use of antitoxin from September, 1894, to September, 1895, were probably due to two causes: inferior antitoxic serums and insufficient doses. A careful consideration of the cases during this period fails to show any marked difference in severity between those that received and those that did not receive antitoxin.

*R. Lake.*

**Ferré.**—*Human and Avian Diphtheria.* “Arch. Cliniques de Bordeaux,” June, 1897.

IN the first place the author satisfied himself by the Gram-Kühne differential stain that true Loeffler's bacillus was to be found in cultures from false membranes obtained from birds. The bacilli were never found in pure culture, but in association with bac. Coli Comm., Friedlander's diplococcus, strepto- and staphylococci.

He relates one case in which true diphtheria (culture test) in a child could be traced to no other source than a hen suffering with paralysis and false membrane of

the conjunctivæ and throat. The child had plucked feathers from the bird and played with them. Loeffler bacilli were found in false membranes taken from the bird, their true character being proved by inoculation experiments on pigeons, guinea-pigs, and rabbits, as well as microscopic differentiation. The *post-mortem* examination of the hen revealed the characteristic appearances of avian diphtheria. To gain further proof of the identity of the disease in man and birds, the action of antitoxin on the latter was tested.

The author first proved that toxin taken from cultures of avian bacilli produced paralysis in healthy birds. He is now engaged in determining the curative effects of repeated injection of ordinary antitoxin (horse with human inoculation) on birds paralyzed by avian diphtheria. So far the majority of birds subjected to treatment have completely recovered. Material for testing the efficacy of ordinary antitoxin against avian diphtheria during the period of membrane has been difficult to obtain. A case, however, is reported where membrane disappeared after three injections, while a control bird, treated with applications of terebine (recognized procedure), did not lose the membrane until eighteen days later. Although sufficient numbers of observations have not yet been made, it would seem that proof is now furnished of the identity of the disease in man and birds, experimental inoculation from bird to man alone being wanted.

Waggett.

**Pitts, Bernard.**—*Diphtheria of the Umbilicus*. "Lancet," April 3, 1897.

THE child was aged fourteen days. The cord had separated on the eighth day and the resulting wound had continued to discharge very offensive pus. The umbilicus was found to be the seat of a dirty-coloured wash-leather slough, discharging extremely offensive pus from an opening into which a probe could be passed for about an inch. It was discovered that the mother and a brother of the patient were suffering from diphtheria, and a culture revealed the presence of the Klebs-Loeffler bacillus. The child died, and at the autopsy nothing abnormal was found in the larynx or pharynx, nor was the condition of the pharynx found to extend to any of the deeper structures.

StClair Thomson.

**Sharman, J. Schutz, and D'Esterre, D.**—*Extensive Subcutaneous Emphysema complicating Diphtheria*. "Lancet," April 3, 1897.

IN a boy aged six, affected with diphtheria, subcutaneous emphysema appeared at the root of the neck, giving rise to the characteristic fine crackling feeling and forming tumours above the sternal end of the clavicle. During the next day the emphysema spread upwards to the submaxillary regions and downwards over the chest, and in a few days air could be felt under the skin all over the trunk, but more marked on the right of the middle line. The antitoxic serum was not given. The dyspnoea did not seem at any time sufficiently urgent to necessitate tracheotomy. The patient died, and a *post-mortem* limited to the neck was all that could be obtained. This was sufficient to eliminate the possibility of ulceration or perforation of the trachea as a cause of the emphysema. The trachea and larynx were found to be lined with false membrane.

As permission to make a complete necropsy was not obtained the cause of the emphysema could not be ascertained. The probability is that the emphysema occurred through the rupture of an air vesicle and the escape of air into the adjacent tissue of the mediastinum, and thence to the neck and trunk. StClair Thomson.

**Slater, Charles, and Cameron, J. A.**—*The Antitoxin Treatment of Diphtheria in St. George's Hospital*. "Lancet," June 12, 1897.

GIVES some statistics of the death rate before and since the introduction of antitoxin. The tables do not allow of a strict comparison between the cases treated and those untreated.

An improvement since the introduction of antitoxin is indicated. The general opinion of the physicians using the serum has been that the need for tracheotomy in even severe cases of laryngeal obstruction is now much less frequent than formerly.

*St Clair Thomson.*

**The "Lancet"** (June 12, 1897).—*The Antitoxin Treatment of Diphtheria.*

A LEADING article reviews the present position of this remedy with particular reference to a monograph recently issued by Prof. Ganghöfner, of Prague. ("Die Serum-behandlung der Diphtherie." Heft 1 des 1 Supplementes des Handbuchs der speciellen Therapie innerer Krankheiten. Jena: G. Fischer. 1897.)

After referring to the statistics on the subject the article points out that the general consensus of opinion amongst those physicians who have fairly employed the serum is that its use is followed by results no whit less certain than those which are ascribed to other drugs believed to have a specific action. Thus, in prescribing antitoxin the physician feels sure of obtaining results as definite as those which ensue on the administration of quinine in ague or salicin in rheumatism.

*St Clair Thomson.*

## MOUTH, &C.

**Bourdette.**—*A Case of Exaggerated Mobility of the Tongue.* "Ann. des Mal. de l'Oreille," May, 1897.

THE case of a man of twenty, the victim of atrophic rhinitis from infancy, who habitually cleared his naso-pharynx of crusts with his tongue. Apart from the condition of the frenum, the organ was natural in size and length, but seemed capable of exploring the whole naso-pharynx and of informing the patient of the existence of his Eustachian orifices and fossæ of Rosenmüller. *Ernest Waggett.*

**Geronti, G.** — *Tonsillar Lympho-adenitis.* ("Linfoadenia Tonsillare.") "Archivio Italiani di Otologia," etc. (Fifth Year), 1897.

THE author saw in the Roman clinic a case of tonsillar lymphoma with lympho-adenitis, which had a fatal issue. From this observation he takes occasion to show (with a careful analysis of all recorded cases) the confusion existing in the denomination of malignant tumours made of connectial (conjunctive) tissue, as the name "lympho-adenomata" served to indicate several neoplasms. He quotes the clinical fundamental ideas which support the diagnosis of tonsillar lympho-adenitis, according great importance to the bilateral impairment, etc. He disagrees with Butlin's opinion, according to which tonsillar sarcomata may be considered in strict relation with Hodgkin's disease, and studies the age and sex in which the disease is more frequent. What we have to mention of more importance than all this is the presence of young parasitic elements observed by the author. They are rather scarce; present towards the peripheral parts of the growth in groups of six, seven, eight, or nine; of a round form, strongly coloured by the green malachite, with a refractile capsule usually visible. Some are extracellular, others intracellular, but never have been found in the nucleus, and these are without a capsule. They are the blastomycetes which Sanfelice and Roncali have so well illustrated.

Geronti, then, is of opinion that lympho-adenitis has a parasitary origin, and if experiments on animals are unsuccessful, this may be explained by the fact that they are very rare on account of the phagocytic power of cells.

*Massei.*

**Grey-Edwards, C., and Severn, W. D.**—*Cases of Follicular Tonsillitis due to Milk Infection.* "Lancet," June 12, 1897.

A RECORD of four cases in which the infection was traced to the milk supply, and then to one particular cow in the dairy. In the milk from this cow were found the same organisms as were present in cultures taken from the tonsils of the patients.

*St Clair Thomson.*

**Heddaeus, A.**—*Acute Tonsillitis due to Staphylococcus Pyogenes Aureus; Metastatic Pleurisy—Diplococcus Pneumonia—Thoracotomy—Sepsis—Death.* "München. Med. Woch.," May 4, 1897.

L. A., twenty-six, labourer, became suddenly ill on 31st January, 1897, with shivering, fever, and, in the evening, sore throat. On February 3rd, 1897, he came into hospital, where there was found swelling of anterior cervical glands on both sides; the whole neck thickened, and painful to touch, specially over larynx; dyspnoea easily produced by pressure on the side of larynx; pharynx red and swollen, tonsils also; in pharynx, mucus and pus; epiglottis, regio arytenoidea, false cords, all swollen and oedematous; true cords hardly visible. A day or two later the swelling, etc., in neck had become so marked, and the danger of suffocation so great, that an exploratory operation was performed; but, although this was very thoroughly carried out, no pus was found. This wound was soon covered with thick, fibrinous, almost diphtheritic deposit, from which abundance of staphylococci could be cultivated. Meantime, a double pneumonia (almost pure diplococcus in sputum) and a double pleurisy developed. Paracentesis thoracis had to be done three times. The fluid obtained on the first two occasions was slightly turbid, greenish yellow serum, from which pure cultures of staphylococcus pyogenes aureus (*i.e.*, the same micro-organism as was found in the wound in the neck) were grown. At the third puncture the fluid was no longer serous, but stinking pus, from which staphylo- strepto- and diplococci were cultivated, as well as a bacillus that produced a strong faecor, turned agar green without rendering it turbid, and turned glycerine green without rendering it fluid. The ninth rib was then resected. Two days later patient died.

At the *post-mortem* examination pus was taken from a small peritonsillar abscess and cultivated on agar-agar; this produced closely-set colonies of staphylococcus pyogenes aureus (*i.e.*, the same micro-organism as was found in neck wound and pleuritic fluid). There can be no doubt that the pneumonia arose quite independent of the peritonsillar phlegmon, but that this was the cause of the pleurisy. The history, the bacteriological and the *post-mortem* results, all support this view. Cases similar to this have been reported by other observers, but generally some other micro-organism has been found; pleurisy due to staphylococcus is extremely rare.

Verneuil's opinion that peritonsillar abscesses should not be incised till fluctuation can be felt or the pus points, and that it is still better to let them open spontaneously, is quite unjustifiable. The author's case, and some others similar to it, demonstrate the danger of leaving the pus to find its own way out: this danger can be prevented only by early incision.

*A. J. Hutchison.*

**Jaboulay.**—*Artificial Alimentary Channel in Cancer of the Lower Parts of the Pharynx and the Top of the Œsophagus.* "Province Méd.," April 17, 1897, from "Presse Méd.," June 30, 1897.

THE method consists in opening the alimentary tract above and below the obstruction, and of re-establishing the continuity of the lumen with an india-rubber tube, which is left in position. Nourishment is thus carried by an artificial Œsophagus running past the cancerous mass. The method has been employed in one case for

four months, and with success, the tissues tolerating the presence of the tube very well. The author suggests the formation of a skin oesophagus by a further development of the method.

Waggett.

**Munger, C.E.**—*Retro-Pharyngeal Abscess*. "Laryngoscope," June, 1897.

A VERY valuable retrospect of the literature, with a report of a case in an adult following on an attack of *la grippe*. The abscess was enormous, and was opened by direct incision and treated by irrigations with peroxide of hydrogen. The disease lasted in all five months.

R. Lake.

**Ququet.**—*A Case of Bucco-Facial Actinomycosis ; Cure*. "Presse Méd.," May 12, 1897.

THE report of a case occurring in a young man, together with excellent coloured photographs. Infection appears to have taken place through the medium of a carious tooth, and the disease at first took the form of a dental abscess. Cure was obtained after some five months by internal administration of potassium iodide and iodine injections into the fistulæ which opened on the cheek.

Ernest Waggett.

**Sabrazes and Bousquet.**—*Acute Streptococcic Macroglossitis*. "Presse Méd.," June 30, 1897.

THE patient, a woman of thirty-four, was admitted into hospital the day succeeding an abortion at the fifth month, with high fever and rigors. The pelvic condition was attended to, but the fever remained high, and pleurisy and broncho-pneumonia supervened. Streptococci were found in the pleuritic fluid. On the eighth day, the tongue, previously dry and red, became painful. The anterior portion from the V to the tip now rapidly swelled, causing dyspnoea, to which, with the cardiac failure induced by the toxic conditions, the patient succumbed on the second day. The tongue had become elastic and pale, and neither tender to or pitting on pressure. Microscopic examination revealed dense infiltration of the whole of the affected portion of the organ, with inflammatory exudation cells, together with considerable thinning of the surface epithelium. The swollen tissues were crowded with cocci, which were found in the greatest numbers near the surface of the organ. No cocci were found in the arteries, nor did their disposition suggest septic embolism. Invasion appears to have spread inwards from the surface of the organ, probably due to infection of the already damaged mucous membrane by cocci expectorated from the broncho-pneumonic lungs. Evidences of profound toxic changes were present in the internal organs.

Waggett.

**Somers, Lewis** (Philadelphia).—*Tuberculosis of the Tonsils, Pharynx, and Larynx*. "Med. and Surg. Reporter," May 29, 1897.

THE author deals with the implication of the lymphoid tissue around the mouth and pharynx in tuberculous disease, pointing out that it is almost always secondary to other mischief. He states that secondary involvement of the pharynx occurs in nearly one quarter of all cases dying of pulmonary or laryngeal tuberculosis. He deals at length with the symptoms and the various forms of remedies prescribed.

StGeorge Reid.

## NOSE, &C.

**Armstrong, H. L.**—*A Tri-Valve Nasal Speculum*. "Med. Record," June 26, 1897.

THIS speculum is for nasal surgery when the patient is under the influence of a general anæsthetic. By its means a better view is obtained, and the tendency shown by bi-valve specula is overcome.

R. Lake.

**Clark, F. R.** (Philadelphia).—*The Nose and Throat in Scarlet Fever.* "Philadelphia Polyclinic," May 1st, 1897.

THE author deals with the condition of the throat in the exanthemata diphtheria, etc., in relation to the systemic infection. He points out that it is frequently the path of infection. As a means of diagnosis he refers to the early appearance of membrane over the tonsil and soft palate, in scarlet fever, before the eruption, and that this membrane cannot be distinguished from the true diphtheritic membrane, with the exception that it is more easily detachable and recurs less rapidly; a brown foetid discharge being suggestive of the latter disorder. As an index of the severity of the symptoms, he points out that undoubtedly there is a constant relation between the severity of the angina and of the disease, and that where the membrane is widespread, and the neck swollen with large, painful, cervical glands, the prognosis is unfavourable.

St George Reid.

**Collier, Mayo.**—*Notes on the Anatomy, Development, Pathology, and Surgery of the Frontal Sinuses.* "Lancet," June 12, 1897.

THERE is no space between the tables of the frontal bone before the seventh year. There may be a complete absence of these cavities even in extreme old age. The extent of the frontal sinuses varies widely, and, unfortunately, the external appearance of the skull gives no indication of these variations. The frontal sinuses are seldom symmetrical, except in a general sense. The frontal sinus of one side may not communicate with the nose or its fellow of the opposite side, but may communicate with the anterior ethmoidal cells of the same side. The septum dividing the two sinuses is usually partly bony and partly fibrous, but is always well marked. It may be entirely bony or entirely fibrous. Its central position is constant. The author has never found a frontal sinus which did not communicate directly or indirectly with the nose. The evolution of the frontal sinuses is not complete until the twenty-first year.

The evolution of the frontal sinuses at the seventh year is ascribed to the fact that at this age—as pointed out by Wenzel—the brain has arrived at its full magnitude. Up to this time the internal carotid artery was many times larger than the external, but immediately after full development of the brain has taken place a sensible diminution in its calibre occurs, and a rapid and large increase is apparent in the external carotid and its branches. The bones of the face, the teeth, eyebrows, and outer table of the skull now grow rapidly, and, the internal table being at a standstill, large spaces occur between the tables of the skull; hence the frontal sinuses.

With reference to the diseases and surgery of the frontal sinuses, it is unfortunate that most of the patients do not apply to the institutions most capable of affording relief. These are essentially cases for the general surgeon who at the same time has a special knowledge of diseases of the nose, and they are primarily in no sense ophthalmic troubles.

In latent empyema of the frontal sinuses, the author considers that it is practically out of the question to treat the disease from the nose by way of the infundibulum. He opens the sinuses in front, at the root of the nose, in the middle line, employing a trephine for removing the bone. An opening must be established with the nasal cavity; a drainage tube is inserted, and daily ablutions with antiseptic fluids will generally suffice to effect a cure in six weeks.

St Clair Thomson.

**Gaudier.**—*A New Method of Removing Fibro-mucous Polypi of the Choanæ through the Mouth.* "Echo Méd. de Nord," April 25, 1897.

THE author recommends the use, under cocaine anæsthesia, of the ordinary adenoid curette, and in six instances has adopted this measure with ease, success, and without troublesome hæmorrhage.

Ernest Waggett.

**Gourc.**—*L'Amygdale de W. Meyer. Bactériologie de Deux Cent et Un Cas, etc.*  
 "Ann. des Mal. de l'Oreille," etc., May, 1897.

THE author's method of examination has consisted in cleansing the growths after removal; slicing with a bistoury sterilized by heat; direct microscopic examination of mucus obtained from the surface so cut, the staining method of Ziehl being employed; cultures on solidified serum at 38° C. Streptococci in association, staphylococci pure and associated, other cocci, pneumococcus (three times), and leptothrix (once), were all found.

In spite of the fact that, of the two hundred and one cases, seventeen had personal tuberculosis, thirty a collateral and eighteen an hereditary history of tubercle, in no single case was Koch's bacillus or microscopical evidence of tubercle detected. In twelve cases inoculation of guinea-pigs gave negative result. The author, therefore, asserts that tubercle bacilli, though frequently, no doubt, present on the outer surface, are not found, except with "excessive rarity," on the section surface of adenoid vegetations.

*Ernest Waggett.*

**Gradenigo.**—*On the Treatment of Ozæna.* "Ann. des Mal. de l'Oreille," June, 1897.

IN view of the temporary character of the results obtained with diphtheria antitoxin and the inconvenient complications which sometimes supervene during its use, the author has made trial of intramuscular injections of iodine. He has used one to three centigrammes of iodine, dissolved after Durante's formula, every two or three days. Some cases have received as many as fifty injections without complication, though they appear to cause a good deal of pain. Suppuration has diminished and become more fluid, and the odour has notably decreased or disappeared. The aural complications have also benefited. He also finds that cases of hereditary deafness which have resisted local treatment have much benefited, both with regard to deafness and tinnitus, from the iodine injections.

*Ernest Waggett.*

**Gradenigo.**—*On the Clinical Signs of Acute Sinusitis Frontalis.* "Ann. des Mal. de l'Oreille," June, 1897.

THE author wishes to draw attention to a condition which is frequently confounded with supraorbital neuralgia. The condition is always preceded by an acute coryza, and between the termination of the latter and commencement of the former a period of some days elapses, during which the nose "runs." Then neuralgic pain commences over the affected sinus, lasting for some ten or twelve days, accompanied by photophobia and lachrymation, and associated with painful crises of severe intensity. Percussion over the affected sinus is attended with pain, and buccal transillumination reveals a unilateral shadow in this region. At the period of resolution some tumefaction of the middle turbinate is made out, and a little mucus or pus is seen near the hiatus semilunaris. On resolution a considerable amount of discharge escapes. As the condition is always unilateral the author considers that anatomical irregularity must permit of the swollen mucosa of the tube determining this condition. The painful crisis may be relieved with phenacetin, quinine, or antipyrine. Locally it is best to apply ten per cent. cocaine on a pledget of wool to the neighbourhood of the hiatus. Warm douches of normal saline are also efficacious.

*Ernest Waggett.*

**Hobbs, Arthur G.**—*Some Amusing Instances of Nasal Reflex.* "Journ. Amer. Med. Assoc.," April 24, 1897.

A MAN was brought to his office on a warm day suffering with almost complete nasal stenosis. For two days past he had had a painful attack of priapism, which had resisted all forms of treatment used. Upon using cocaine in the nostrils to

reduce the swelling the priapism was relieved at the same time. Another case very similar to this was seen later, in which the priapism was relieved by reducing the nasal turgescence. He had seen numerous cases showing similar reflex connections between the erectile tissues of the two parts.

O. Dodd.

**Hubbard, T. (Toledo, O.).**—*The History and Necropsy of a Case of Fibro-Sarcoma of the Naso-Pharynx and Middle Cerebral Fossa. Associated Conditions: Ethmoiditis, Empyema of the Sphenoid Cell, Otitis Media, Pachymeningitis.* "Arch. of Otol.," April, 1897.

THE patient, who was fifty years of age, developed paresis of the left external rectus along with pain in the ear, which frequently required paracentesis for evacuation of serous fluid. There was an œdematous swelling in the naso-pharynx pressing on the Eustachian tube, whence the tympanic exudation. In the left nasal meatus there were a few polypi. A portion of the naso-pharyngeal tumour was found to consist of fibrous and lymphoid tissue. Pains increased in spite of specific treatment. The left palato-pharyngeal muscles were paralyzed. There was occasional coma, cerebral vomiting, and sluggishness of the bowels, the temperature being normal or subnormal. Death ensued, and there was found a round-celled sarcoma in the left middle fossa close to the sphenoid; a smaller one occupying the left half of the naso-pharyngeal space. The contiguous bone was soft and spongy. There was pachymeningitis on both sides of the longitudinal sinus and pus in the sphenoidal sinus.

Dundas Grant.

**Kugh, J. T. (Philadelphia).**—*Congenital Occlusion of the Right Naris posteriorly*—*Successful Operation.* "Philadelphia Polyclinic," April 3, 1897.

THE right naris was found to be occluded posteriorly by a smooth, translucent membrane stretched tightly over the nasal aperture. After the application of twenty per cent. cocaine solution, a free opening was made in it by the electro-cautery knife applied anteriorly, and the remainder extirpated through the mouth and pharynx by means of a long curved cautery knife. The patient made an excellent recovery.

St George Reid.

**Lindt, W., jun. (Berne).**—*Direct Inspection and Manipulation of the Region of the Pharyngeal Tonsil and the Salpingo-pharyngeal Fold in their Uppermost Parts.* "Arch. für Laryngol.," Vol. VI., Part I., 1897.

THE instrument employed is a wide palate hook, concave on its lower surface, notched at its tip (to accommodate the septum), and with its handle bent upwards at a slightly obtuse angle—not downwards. The patient is seated at a higher level than the observer, and his head is tilted backwards. Reflected light is used, and the instrument is introduced with or without the previous application of five per cent. cocaine. The writer claims, among other advantages, that by this method the naso-pharynx is visible in cases in which, on account of projection of the vertebrae, posterior rhinoscopy would be inefficacious.

Dundas Grant.

**Photiades (Constantinople).**—*A New Method of Post-operative Treatment of Frontal Empyema.* "Ann. des Mal. de l'Oreille," May, 1897.

THE author, desiring to submit the curetted surface to constant ventilation, has devised a curved silver canula, perforated with numerous large holes, and provided with a collar, which is introduced by the frontal fistula, and extends into the nasal fossa. The apparatus has the appearance of an elongated tracheotomy tube of the large size. After the first few days the tube can be removed by the patient, for the routine syringing of the sinus. Two cases are reported in which excellent results were obtained. In one case the canula could be dispensed with at the end of three weeks.

Ernest Waggett.

**Prota.**—*Un Cas de Rhinite Professionnelle.* "Boll. delle Mal. dell' Orecchio," 1897, No. 1, p. 5.

THE case of a man brought by his employment into perpetual contact with poplar and pine sawdust. The anterior end of one inferior turbinate and a corresponding area of the septum showed an infiltrated granular surface covered with a grey exudate. This and the accompanying general catarrh were speedily relieved by antiseptic douches and cessation from work.

Waggett.

**Rhodes, J. Edwin.**—*Atrophic Rhinitis.* "Journ. Amer. Med. Assoc.," June 26, 1897.

AFTER giving the views of the various authors regarding the etiology of the disease he gives the treatment used. After thorough cleansing of the nasal cavities with an alkaline solution, containing thymol and eucalyptus, he insufflates a powder containing about two per cent. of cocaine, and hydrarg. oxidi flav., two per cent. to five per cent. The effect of the cocaine upon the atrophied membrane is to produce paralysis of the vaso-motor nerves, and consequently dilatation of the blood vessels and increased nutrition of the parts. Its use was first suggested by Ingels, and the results are very marked. In none of the cases was there any constitutional effect.

O. Dodd.

**Roe, J. O.** (Rochester, N.Y.).—*The Correction of Depressed and Saddle-back Deformities of the Nose by Operations performed subcutaneously without the Aid of Metallic or other Artificial Supports.* "Med. Record," June 5, 1897.

THE writer deals with those cases in which there is an entire or fairly complete septum. The depressed noses are classed into idiopathic and traumatic. The latter are those forming the subject of this paper, the former having been dealt with on a previous occasion. In restoring a nose to something of its former shape, not only nasal symmetry but facial symmetry must be studied, as no two cases can be dealt with precisely in the same way. The author gives details of six cases, and, much though it is to be desired, an abstract cannot well be made; so the first case will be given fully, and those interested must refer to the original paper.

CASE 1: Congenital flattening of the end of the nose. A young man of eighteen. In this case the anterior and superior portion of the triangular cartilage was missing, and the flattening of the end of the nose and the consequent lateral bulging of the alæ gave it the appearance of a frog-shaped nose. Besides this, the frenum of the nose was attached so low down on the lip as to cause the end of the nose to stand backward, and the nostrils to stand prominently open, aided by the upward tilt of the end of the nose. To correct this deformity it was necessary to adopt a special plan of operation in order to raise the end of the nose instead of depressing it, as is the case in pug-nose, and sometimes when the central part of the nose is depressed. In order to reduce the width of the nose and to remove the flattened appearance, sufficient tissue was taken from the interior of the alæ to form a flap, which was carried upward and held in place under the skin at the tip of the nose. It required two operations at different times to accomplish this. In order still further to raise the point of the nose the frenum was lengthened and its attachment set back on the upper lip. This was done by cutting through the anterior column of the frenum on a line with the upper lip; then carrying the incision upward about half the length of the frenum, and then backward, forming a stair, and then upward equal to the length of the first horizontal incision through the frenum, so that the lower end of the frenum would fit into the second stair, so to speak. The lower end of the frenum was then set into the second stair and carefully stitched there. The skin on each side of the lower end of the frenum from which the anterior column had been removed was then raised and the edges drawn

together in front of this denuded surface, so that on healing no perceptible scar was left. Two or three minor operations were required to complete the work. So symmetrical and perfect was the nose that those acquainted with the young man would not suspect that any deformity had ever existed. The author gives three conditions, the observation of which is necessary to obtain success. Firstly, strict antisepsis; secondly, the tissues must be carefully used to their greatest advantage; and, thirdly, great care must be taken subsequently during healing--retentive apparatuses and constant adjustment of dressings and other supports must be carried out with greatest attention to minutiae.

R. Lake.

**Stout, George C.**—*A Case of Infantile Atresia of the Nasal Fossa with unusually rapid Respiration.* "Journ. Amer. Med. Assoc.," May 22, 1897.

THE child, three months old, was apparently healthy and well nourished but for some eczema and the rapid breathing. The respirations were shallow, and numbered 105 to the minute. He had continued rapid breathing since birth, and occasional attacks resembling laryngismus stridulus. It had been necessary to feed him with a spoon on account of the difficulty in breathing. The nasal fossæ were almost closed, but a small probe could be forced through. Breathing was mostly through the nose in spite of the difficulty, and this continued through the treatment. Mercury and potassium iodide were given internally, and the nose was treated locally with ointments of yellow oxide and menthol. After three treatments the respirations were reduced to from 45 to 50 per minute

O. Dodd.

## LARYNX.

**Ardouin.**—*Cancer of the Larynx.* (Soc. Anatomique.) "Presse Méd.," June 26, 1897.

SECTIONS and report of a case of rapidly growing squamous epithelioma of the larynx. Total laryngectomy was performed and the patient succumbed to pulmonary complications on the sixteenth day.

Waggett.

**Fasano, Prof. A.**—*On the Therapeutic Value of Airol, with special regard to Throat, Nose, and Ear Diseases.* ("Sol valore terapeutico dell' Airol, con speciale riguardo nille Malattie di Gola, Naso, e Orecchio.") "Arch. Internaz. di Med. e Chir.," Avril, 1897.

THE author, in order to give a right judgment upon the therapeutic value of airol, has made comparative experiments with iodoform and aristol in cases of chronic laryngitis, ulcerations (tubercular and syphilitic) of the larynx, chronic rhinitis, ozæna, nasal tuberculosis, as well as in purulent otitis.

Airol was employed as a powder, a pomade, an emulsion in glycerine, and as gauze. He judges the remedy to be superior to iodoform and aristol, quick in its action, not dangerous in its effects.

Massei.

**Fischer, L.**—*An Improved Intubator for the Relief of Laryngeal Stenosis.* "Med. Record," June 20, 1897.

THE tubes are corrugated and act as a self-retaining device, being much less easily ejected; they are made of vulcanized Para rubber, the best and purest obtainable. The length is the same as O'Dwyer's. They are made large in the centre, partly for weight and partly to assist in retaining them, and as they are cheap a fresh one should be used for each patient. The introducer is also very ingenious, as the lumen of the tube is never occluded.

R. Lake.

**Goris.**—*Preliminary Note on the Surgical Treatment of Tuberculosis of the Larynx taken at its Commencement.* Soc. Medico-Chir. de Bruxelles. "Rev. Hebd. de Lar.," June 5, 1897.

THE author suggests the adoption of laryngo-fissure in early tubercular lesions. He describes the proceeding as undertaken by him, in two cases, with happy results. The first was that of a young woman of twenty, whose larynx exhibited a small ulcer on one arytenoid. No physical signs of lung disease were present, but tubercle bacilli were found in the sputa. Laryngotomy was performed, and the ulcerated part, together with six definite tubercles on the under surface of one vocal cord, were removed with the curette. The proceeding was followed by the abatement of hoarseness previously present, and by the disappearance of tubercle bacilli from the sputa. In the second case (a man of twenty-five) one vocal cord, infiltrated with a soft tissue analogous to that of lupus, was removed in a similar manner. Hoarseness persisted, though a firm cicatrix formed. *Ernest Waggett.*

**Hecker, R.**—*Secondary Hæmorrhage after Tracheotomy from Erosion of the Innominate Artery.* "Münchener Med. Woch.," May 18, 1897.

THE author relates the case of a girl, two and three-quarter years old, with diphtheria, on whom, after intubation had failed, low tracheotomy was performed. During the first three days nothing unusual was noted. On the fourth day the wound appeared unhealthy and was spreading at its lower angle. Two days later, one hour after the tube had been changed without any difficulty whatsoever, violent hæmorrhage from the lower part of the wound set in and caused death in four to five minutes. At the *post-mortem* examination no false membrane remained in the trachea; the edges of the wound were swollen and necrotic, the necrosis extending from the lower end of the wound down the trachea about four millimètres, then spreading out to form a circular defect about the size of a lentil. At this spot the arteria innominata, which was unusually high, was adherent to the trachea. In the midst of this adhesion was a small opening through which a thick knitting needle could be passed from the artery into the trachea.

The author next cites shortly all previously reported cases. In four of these, necrosis, starting from the inferior angle of the wound, spread along the trachea and perforated the adherent artery. In a fifth case, not the innominate itself but an aneurysma spurium was perforated. Thrice the necrotic process was started on the inner surface of the trachea below the level of the actual wound by pressure of the end of the canula.

The necrosis may be a diphtheritic process or may be due to a secondary infection by the ordinary pus micro-organisms. The author considers the latter much the more common method. Abnormality in the origin and course of the artery seems to play a certain rôle in these cases. Thus in one case the innominate was left-sided; in a second it arose unusually far to the left; in a third it was pushed too high up; in his own case also it lay rather higher than usual. At best the arteria innominata is rendered liable to secondary infection by its position below the site of operation. This naturally raises the question, "Could this danger not be avoided by performing high instead of low tracheotomy?" High tracheotomy has unfortunately also been followed by erosion of blood vessels. Zimmerlin cites three cases. In the first the arteria thyroidea sup. dextra was eroded; in the second the vena jugularis ant. sinist.; and in the third the arteria thyroidea sup. sinist. It seems to be a matter of little importance whether metal or vulcanite tubes are used, as erosions have occurred with both.

*A. J. Hutchison.*

**Kirstein.**—*Laryngoscopie Combinée.* "Ann. des Mal. de l'Oreille," June, 1897.

THE author describes a development of laryngeal autoscapy which he terms

combined laryngoscopy. It consists in the introduction of a small mirror behind the epiglottis, when the tongue is already depressed with the spatula as for auto-scopy. The method is only intended for those unusual cases in which the anterior commissure is invisible by the classical laryngoscopy. In two cases the author has employed the method with ease and success for the removal of polypi situated in the anterior angle.

Ernest Waggett.

**Lermoyez.**—*Les Causes des Paralysies Récurrentielles.* “La Presse Médicale,” May 5, 1897.

THIS is an academic thesis dealing with the pathology and pathogeny of recurrent paralyse, and contains, we believe, nothing new in the way of observation or theory. The matter is, however, so complete and so clearly presented that the paper should be read by all specialists and general physicians who are not fully acquainted with the subject. The object of the thesis is to emphasize the fact that recurrent paralysis is not necessarily a symptom of great gravity, and the author proposes a clinical classification, as follows:—

1. The classical form indicative of mortal disease.
2. Incurable benign cases involving a permanent laryngeal infirmity compatible with prolonged life.
3. Curable benign cases, which may leave no trace on recovery and which appear to indicate a primitive neuritis, sometimes the result merely of chill.

Ernest Waggett.

**Martuscelli, G.**—*Another Amyloid Neoplasm of the Larynx.* (“Di un altro Tumore Amiloide della Laringe.”) “Archivio Italiani di Laringologia,” January, 1897.

CONTINUING his studies on this subject, the author, employing the surest and best known reactions in order to decide amyloid substance (ematossiline and eosine, Geeson’s reaction, Lurgol’s solution, iodine green, gentiana violet, and methyl), was able to demonstrate it in a classical manner in a little growth removed by Prof. Massei from the vocal cord of a patient.

This confirms the opinion expressed by Rudnew—*i.e.*, the mixed degeneration (origin of amyloid substance from capillary blood vessels or cells of the tissues), as well as a certain frequency of laryngeal neoplasms in which amyloid substance is present.

Massei.

**Massei, Prof. F.**—*The Diagnosis of Laryngeal Tuberculosis.* (“La Diagnosi della Tuberculosis Laringea.”) “Archivio Italiano di Otologia,” etc. (Fifth Year), 1897.

MASSEI insists upon the difficulty of well recognizing early cases of tubercular laryngitis which simulate chondritis or syphilitic infiltrations. It frequently happens that no pulmonary sign is present—no tubercular bacilli found. The patient may be really a syphilitic one, but he is, in the meantime, affected by tuberculosis.

We can affirm the true nature of the disease in such doubtful cases either by a microscopic examination of small pieces or by inoculations in guinea-pigs, or, better, by both.

The author was struck with the interest of such a fact, which allows an early surgical treatment with curettement and local applications; he is also convinced that similar cases are less rare than believed, and they practically confirm Fraenkel’s opinion on the prevalence of tuberculosis by inhalation, *i.e.*, the evidence of a primary laryngeal tuberculosis in a more frequent rate than is commonly believed. He expresses the wish that such a practice (removal of small pieces of the affected tissues for experiments) may be taught as a rule in the schools, and applied often in the practice.

Massei.

**Phillips, W. C.**—*Early Diagnosis of Epithelioma of the Larynx; with Report of a Case.* "Laryngoscope," June, 1897.

THE patient was a clergyman, aged sixty-three, and he had had symptoms dating back four months. The only one of prominence was huskiness, which, however, had not prevented his preaching regularly three times on Sundays. The left ventricular band was slightly congested. On the left cord, at the junction of the middle and posterior third, were three small nodules, surrounded by a small area of congestion; the nodules were pinkish white in section. The largest nodule was removed and diagnosed as epithelioma by Dr. Jonathan Wright. The patient was operated on by Dr. B. F. Curtis, the entire left half of the larynx being removed. He nearly succumbed to pneumonia, but rallied, and, six months after the operation, showed no signs of recurrence. The writer considers that epithelioma is rarely seen early; that, if seen early, errors of diagnosis are apt to occur; that literature regarding the premonitory symptoms is very meagre; recent literature tends to show the vocal cords are the favourite site of laryngeal cancer; the ulceration which followed removal of the nodule is evidence against endolaryngeal operation for this disease.

*R. Lake.*

**Raugé.**—*Laryngocele Ventriculaire.* "Ann. des Mal. de l'Oreille," etc., June, 1897.

THIS paper is interesting not only as putting on record a fresh case of this very rare condition, but inasmuch as it describes the origin and progress of the deformity as observed by the author in a patient who has been constantly under his observation for eight years.

The subject was a man of six-and-twenty, the victim of malignant syphilis. After three years the larynx became affected with the typical form of infiltration associated with fixation and finally destruction of the true vocal cords. After this condition, with its accompanying aphonia, had existed some two or three years, the patient trained himself to produce a hoarse but sufficiently audible voice, the result of approximation of the thickened ventricular bands. At the end of three years, during which this mode of vocalization had become habitual, the author again examined the larynx. The condition of infiltration was found but little altered, but on vocalization three new phenomena were observed.

1. A kind of sudden jump (*ressaut brusque*), which imparted a shock to all the visible parts of the larynx, and notably to the epiglottis.

2. The appearance of a large rounded tumour, which filled the left side of the vestibule at the level of the ventricular band and aryepiglottic fold.

3. The production of a similar tumour visible on the surface of the neck at the level of the thyro-hyoid membrane. This tumour was the size of a walnut, and extended from the upper border of the thyroid cartilage on the left side to the great cornu of the hyoid. It sprang into being with a jerk at the moment of vocal effort, and suddenly disappeared on the termination of the effort. Percussion showed it to be resonant. During vocalization, attempts at manual reduction were only partly successful, and at the same time the voice became stifled owing to increased distension of the intralaryngeal tumour. These tumours evidently intercommunicated by a small orifice. The deformity caused no sort of inconvenience, and possibly aided in the approximation of the ventricular bands. The author points out that the tumours represent a dilated ventricle of Morgagni, which has herniated to the outside of the larynx over the top of the cartilage. The dilatation and the herniation are clearly due to the abnormal internal air pressure, which results from the upward shifting of the functional glottis from the level of the true to that of the false vocal cords. The walls of the ventricle are exposed

to an air pressure even in excess of that normally found in the trachea on phonation, inasmuch as an extra effort is required with an impaired organ. Further, the resisting powers of the tissues are reduced by the syphilitic infiltration.

Ernest Waggett.

**Schmiegelow.**—*Cancer du Larynx. Diagnostic et Traitement.* "Ann. des Mal. de l'Oreille," etc., April, 1897.

THIS very important paper, occupying seventy pages of the journal, and indicating the present position of the subject of intrinsic cancer with respect to diagnosis and treatment, can only be appreciated by perusal in the original. Besides the author's own results (eight operations), a large number of cases operated during recent years are given in tabular form; but without detailing the several considerations which are taken into account in constructing the statistics, it is undesirable to reproduce here the figures arrived at. In early cases the author considers thyroto-my with resection of soft parts the operation *de choix*, with immediate removal of the tampon canula.

Waggett.

**Stuart, T. P. Anderson.**—*An Artificial Larynx.* "Lancet," Apr. 17, 1897.

It would be impossible in the space at our disposal to give an intelligible description of the instrument. Our readers are therefore referred to the original article, where the invention is also illustrated.

St Clair Thomson.

**Wallenberg.**—*Paralysis of the Left Side of the Face and Tongue, of Deglutition, and of the Larynx, due to an Area of Softening in the Right Centrum Ovale.* "Neurolog. Centralblatt," 1896, No. 5, p. 199.

THE case is of interest as affording a fresh detailed example of laryngeal hemiplegia, the occurrence of which would on physiological grounds appear to be impossible.

Ernest Waggett.

## E A R.

**Baker, A. R.**—*Pyogenic Brain Disease.* "Ann. Otol.," etc., February, 1897.

THE author details sixteen cases of otitic brain disease:—(1) A subdural abscess which discharged spontaneously through a trephined mastoid; (2) cerebral abscess connected with mastoid abscess; (3) cerebral abscess; (4) cerebral abscess; (5) subdural abscess. All these recovered. (6) A girl who died after exploratory operation at which the lateral ventricle was tapped, with temporary benefit. The petrous bone was necrotic, there was a large subdural abscess, and the left cerebellum was an abscess cavity. (7) A subdural abscess in a boy who died unoperated upon, as the parents would not consent to operation; (8) no abscess found, though the cerebrum was twice explored and the cerebellum once. The patient died; no *p.m.* allowed. (9) Sinus thrombosis in a child of nine years—the sinus was opened, and the child recovered; (10) sinus thrombosis—a girl of eleven—sinus opened and curetted; good recovery, as were Cases 11 and 12, but in 13 the sinus was not curetted, and the patient died of pyæmia five weeks later. This case was one of the early ones of the operator's series, and he looks on the fatal issue as not unlikely to have been avoided if the treatment had been more energetic. (14) Meningitis; mastoid opened with temporary benefit; death. (15 and 16) Meningitis; mastoid opened, temporary benefit; death. (17) Meningitis; calvaria opened and pus found, but patient died shortly after.

R. Lake.

**Cohen-Kysper** (Hamburg).—*A New Method of Treating (by Digestive Ferments) Deafness due to the Sequels of Catarrhal and Suppurative Inflammations of the Tympanum.* "Arch. of Otol.," April, 1897.

DÖG's pepsin, in solution of the proportion of one to ten thousand, rendered chemically pure by passage through a bacteria filter, is employed. One-half to one decigramme is injected by means of a Koch syringe with a fine needle through the membrane (if this be entire), as near as possible to the niche of the fenestra ovalis. It cannot be repeated before the lapse of several months. When there is a perforation the fluid is simply poured in and the head is kept lying on the opposite side for about an hour. It is found unsuitable for cases of sclerosis, but it seems to have been beneficial in two-thirds of the forty-five post-suppurative cases in which it was used. The author frankly considers it still a therapeutic experiment. [The results of further trial will be of great interest.—D. G.] *Dundas Grant.*

**Cheatle, Arthur** (London).—*The Conducting Portion of the Labyrinth.* "Arch. of Otol.," April, 1897.

THE "perceptive" portion of the auditory apparatus has its peripheral commencement at the hairs of the auditory cells and the portion of the labyrinth between the stapes and these structures are, in reality, "conducting" in function. The writer very properly holds that "increased bone conduction should be said to indicate trouble in the external or middle ear, and not, as is so often said, of the conducting apparatus." He compares Ménière's disease with glaucoma, as being possibly due to increase [of tension of the labyrinthine fluids from disturbance of the balance of secretion and outflow, and he speculates on the possibility of puncturing the outer wall of the labyrinth for the relief of such tension. [These views have been expressed by Brunner, Botey, and others, but they appear to have been arrived at independently by Mr. Cheatle, whose concise statement of them is well worthy of attention.—D. G.] *Dundas Grant.*

**Eulenstein, H.** (Frankfort-a.-M.).—*A Case of Otitic Pyæmia Cured by Excision of the Thrombosed Internal Jugular Vein.* "Archiv. of Otol.," April, 1897.

A MAN, aged twenty-five, had had otorrhœa from childhood. Epidermic masses were dislodged by instillations of peroxide of hydrogen. Radical operation was refused. A month later the patient returned complaining of headache, the discharge having ceased. Mastoid operation was performed, a large cholesteatoma removed, and pus in the sinus groove evacuated. There was considerable discoloration and granulations on the sinus and adjacent dura, and the sinus wall gave way, allowing of the escape of pus from its interior. The ligation of the jugular was postponed, but rigors and febrile temperature ensued; with these was bloody expectoration and jaundice. The jugular vein exposed, ligatured, and divided at the upper border of the thyroid cartilage. It contained purulent thrombus, but no blood. Further exposure downwards was therefore carried out, ligation was effected close to the entrance into the innominate, and the vein, the lower part of which contained blood, was dissected out. Several metastatic abscesses formed and were evacuated, the patient recovering and leaving hospital in little over a month.

Eulenstein agrees with Jansen that if after clearing out the sinus, high fever persists, chills occur, or pus exudes from the bulb, the jugular and facial should be ligatured, the former being slit up as far as the base of the skull.

*Dundas Grant.*

**Garnault.**—“*Le Traitement Chirurgical de la Surdit   et des Bourdonnements.*”  
Par P. GARNULT. (Paris : A. Maloine. 1897.)

DR. GARNULT is a consistent supporter of the practice of surgical intervention in all cases in which deafness and tinnitus arise from disease of the conducting apparatus, as indicated by the “negative Rinn  ,” when these symptoms do not yield to treatment by means of inflation. His experiments lead him apparently to the conclusion that when the tympanum is perforated the ossicles should be removed. He advocates the retro-auricular operation, and deprecates that through the meatus. A negative result from exploratory tympanotomy is not considered a contra-indication. When the hearing is not improved by the operation he attributes this to involvement of the percipient apparatus. Diminution of hearing lasting for a time after the operation occasionally results from the traumatic disturbance. It sometimes supervenes later on.

Admitting frankly these drawbacks, Dr. Garnault is still keenly impressed with the value of the treatment he recommends, though apparently still on the outlook for more definite prognostic data. [Even those who fail to share Dr. Garnault’s sanguine enthusiasm are bound to watch his results and to give his arguments due attention.—ED.]

Dundas Grant.

**Goldstein, M. A.**—*Advanced Method in Teaching the Deaf.* “Laryngoscope,”  
June, 1897.

A CRITICAL essay, which deals first with the older methods in historical order and next with a clear description of Urbantschitsch’s method. Mr. B. Thornton, of the Institute for the Deaf, at Margate, has brought the telephone into use ; for by its aid, not only is the sound intensified, but instruction can be given out to many at the same time. The main objects should be (1) a differentiation and proper perception of sound ; (2) a stimulation in sound intensity, with a gradually increasing acuteness in aural perception. A large amount of the success is due to the fact that in many deaf people the trouble is want of proper interpretation of acoustic impressions. A table of sixteen cases, showing what can be done, concludes this valuable article.

R. Lake.

**Haenel** (Dresden).—*A Case of Tubercular Caries of the Middle Ear perforating the Fenestra Rotunda and Ovalis, with Report of Microscopic Examination.*  
“Arch. of Otol.,” April 1897.

THE case of a child of three months, whose mother had died of galloping consumption. Otorrh  a had been present for a month, accompanied by facial paralysis. Bare bone could be felt in the tympanum. Rapid loss of strength took place, and death speedily ensued. There was general tuberculosis, but in a less advanced stage than the disease in the ear. The part of the ear most affected was the inner wall of the tympanum, especially in the cochlear region. Proliferation of tissue had extended through the oval and round windows, but these were not opened. The facial canal was freely eroded. The paper is accompanied by very beautiful microscopical drawings, and some important bibliographical references.

Dundas Grant.

**Hoffmann, R.** (Dresden).—*Extensive, but Non-Infected, Thrombosis of Several Sinuses, of the Brain, and of the Jugular Vein, due to Operative Injury of the Lateral Sinus—Recovery.* “Arch. of Otol.,” April, 1897.

DURING the performance of the radical operation some granulations were scraped away, and immediately there was a violent h  morrhage from the lateral sinus. This yielded to plugging with iodoform gauze. Pain continued, and there supervened par  sthesia of the opposite hand and paralysis of the opposite side of the

face, optic neuritis, delirium, cerebral vomiting, and swelling over the jugular vein. Thrombosis or abscess of the brain was suspected, and exploration for the latter was practised with negative result. The sinus was further exposed; puncture showed thick dark blood, and incision a brownish red thrombus. For a few days there was improvement, but soon there was a relapse; yet the facial paralysis disappeared, and the hand became paralyzed, the pupil on the side of the lesion being larger than the other. There was œdema of the eyelids. Slow but complete recovery took place. The author concludes that this was a case of injury to the transverse sinus, followed by extensive thrombosis. The facial paralysis was probably of subcortical or capsular origin—not cortical nor basal.

*Dundas Grant.*

**Lannois and Martz.**—*Chemical Analysis of Cerumen.* "Ann. des Mal. de l'Oreille, du Lar.," etc., June, 1897.

FATTY substances soluble in ether and alcohol constitute in weight more than a third of cerumen dried *in vacuo*. Free fatty acids amount to 2.99 per cent.; fats, 8.16 per cent.; cholesterine, 7.06 per cent.; soaps soluble in alcohol, 16.10 per cent. Lecithin occurs to the amount of 3.74 per cent., and leucomains are probably present. The nature of the element giving a bitter taste to cerumen is not determined. Alkaline solutions readily dissolve the pigment. The above results were obtained from a mixture of cerumen plugs.

*Ernest Waggett.*

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## REVIEWS.

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**Love.**—*Deaf-Mutism: a Clinical and Pathological Study.* By JAMES KERR LOVE, M.D., Aural Surgeon to the Glasgow Royal Infirmary, Honorary Aurist to the Glasgow Deaf and Dumb Institution. With Chapters on the Education and Training of Deaf Mutes by W. H. ADDISON, A.C.P., Principal of the Glasgow Deaf and Dumb Institution. (Glasgow: MacLehose and Sons. 1896.)

DR. KERR LOVE has already made some very valuable contributions to the literature of deaf-mutism, and that portion of the work now before us which is from his pen may be regarded as the representation of his matured views on the subject. He has studied deeply the works of others, and has supplemented their observations, whether statistical, clinical, or pathological, by many original investigations of his own. In regard to the estimation of the hearing power of deaf mutes he has many practical suggestions to offer, but we look in vain for a means of removing the difficulties connected with the examination of an infant suspected of being deaf. He employs a large dinner bell for extreme cases. The rarity of absolute deafness in deaf mutes is pointed out, and in this lies the keynote of the treatment, namely, the endeavour to arouse and stimulate the development of the residuum of hearing power by acoustic exercises in every case, before referring the pupil to the pure oral or, *à fortiori*, the sign system of instruction. In regard to congenital deafness, the tendency to its hereditary transmission is proved beyond doubt, and a strong case is made out for its occurrence as a result

of consanguineous marriages. The occasional late development of the hearing power, and even spontaneous cure, in congenital cases, are referred to (p. 181). Attention is drawn to the fact that the defect in the inner ear may be only partial, and alone insufficient to account for the high degree of deafness without the coincidence of an accessible and often curable affection of the naso-pharynx and tympanum.

The educational aspect of deaf-mutism is treated by Mr. W. H. Addison in Chapters IX. to XIV., where will be found a full and interesting account of the history of the education of the deaf mute, his mental condition, the various methods of education,—oral, sign, and manual, or combined,—the results, and the present state of deaf mute education. They contain an immense amount of material which is, perhaps, less familiar to the aurist than that offered by Dr. Kerr Love. It would be difficult to find a more succinct account of this part of the subject. The various systems are freely compared, and it seems to us that very just inferences are arrived at. The pure oral system appears to be adapted to the capacity of about half the cases of deaf-mutism. It should, as already said, be tried in all, and those who are found to be apt should be educated entirely by it. The others should be drafted into the silent department of the “dual” school, to be taught on the sign and manual plan. The bibliographical references give a good idea of the literature of the subject for anyone desiring further details.

The whole work is highly readable; it contains most instructive statistical tables, and many interesting illustrative narratives. It deserves to command a ready sale.

Dundas Grant.

*Manhattan Eye and Ear Hospital Reports.* Jan., 1897. (“Knickerbocker Press,” New York.)

AMONGST the articles of special interest in this year's reports are :—

- Otitis Media Suppurativa Acuta*—James E. H. Nicholls, M.D.
- Otitis Media Suppurativa Chronica*—James E. H. Nicholls, M.D.
- Furunculosis of External Auditory Meatus*—M. D. Ledermann, M.D.
- Diseases of the Internal Ear*—T. J. Harris, M.D.
- Hysterical Deafness*—E. Pearce Hoover, M.D.
- Acute Primary Mastoiditis*—Marcus Kenyan, M.D.
- Exostosis of the Septum*—Chas. H. Knight, M.D.
- Deflection of the Septum*—H. H. Butts, M.D.
- Deflection of the Septum*—B. Douglass, M.D.
- Retro-Pharyngeal Abscess*—C. H. Meneger, M.D.
- A Mechanical Saw*—L. L. Mial, M.D.

Dr. Nicholls reports some instructive cases; Dr. Ledermann enters fairly fully into the literature of his subject, and reports a case in which the mastoid operation was necessary. Dr. Harris has carefully tabulated the diseases of the internal ear coming under treatment between the years 1894 and 1897, with the results of treatment. Dr. Hoover's article embodies much of interest, especially in the brief narration of cases. Dr. Kenyan's case is one which, if there had been any history of influenza, would have served as a good example of influenza mastoiditis. The next three articles on the nasal septum are all well worthy of consideration,

especially that from the pen of our well-known colleague, Dr. Knight. Dr. Mial's instrument is of interest chiefly from having a brake, which absolutely controls the pace, and by having a mechanical plane for use on the septum.

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### NEW PREPARATIONS.

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RED GUM TABLOIDS (Burroughs, Wellcome, & Co., Snow Hill Buildings, London).

This drug, long known as a mild styptic and antiseptic and as an excellent local and general astringent, has been prepared in "tabloid" form for some time. Recently alterations have been effected in the formula, and great care has been exercised so to adjust the relative proportions of the ingredients that the full therapeutic effect of the drug may be obtained without offending the palate or affecting the appetite. Red gum "tabloids" are supplied in bottles, containing one hundred in each, and may be recommended as an agreeable and mild styptic.

#### "SAXIN" IN "TABLOID" FORM.

"Saxin" is the name given to a powerful sweetening agent recently introduced and issued in "tabloid" form by the same firm. It possesses a sweetening power about six hundred times greater than that of sugar, and is most delicate in flavour. This makes it acceptable to many patients who have hitherto refused all sweetening agents other than sugar. A quarter-grain "Saxin tabloid" may be substituted for each lump of sugar in the case of patients suffering from diabetes, gout, obesity, glycosuria, etc. By this means the harmful effects of sugar will be avoided, since "Saxin" has no harmful action on the system. "Saxin" in "tabloid" form (one-quarter grain in each) is issued in bottles of one hundred and two hundred.

# THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

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## ANGINA EPIGLOTTIDEA ANTERIOR.

By WILLIAM MILLIGAN, M.D.

IN the March number of THE JOURNAL OF LARYNGOLOGY an interesting case of angina epiglottidea anterior is recorded by Dr. W. P. Meyjes, of Amsterdam.

As such cases are distinctly rare, the particulars of the two following instances of the disease may not be without interest to the readers of the journal.

Towards midnight, one evening, I was summoned to see Miss X., aged nineteen, who was said to be suffering from severe pain in the throat, accompanied by a certain degree of dyspnœa.

For a week or so previous to my seeing the patient slight shooting pains had been complained of in and around the throat, and slight swelling of the cervical lymphatic glands had been observed, especially on the right side. No definite cause could be assigned for this, and beyond being slightly anæmic the patient had enjoyed exceptionally good general health. Upon examination of the pharynx congestion of the faucial pillars was observed. The base of the tongue was coated with a thick creamy fur, and the lymphoid tissue in front of the epiglottis was distinctly enlarged, swollen, and œdematous. The free border of the epiglottis was enormously enlarged and of a brilliant red colour. The swelling and œdema were most noticeable upon the right side, but extended also along the free borders of the aryepiglottic folds. Beyond slight congestion and swelling of both false cords there was no actual intra-laryngeal lesion. The patient's temperature was 101° Fahr., the pulse rapid and soft, and the skin moist. Headache was also complained of. The most marked and by far the most troublesome symptom throughout the course of the disease was the dysphagia. Even the act of swallowing saliva was accompanied by severe pain shooting up from the throat to the ears. The patient was advised to keep warm and quiet

in bed, and to inhale steam containing compound tincture of benzoine and chloroform as frequently as possible.

Warm boracic fomentations were applied round the neck and over the enlarged and tender cervical lymphatic glands. The interior of the pharynx was also frequently sprayed with an ice-cold four per cent. solution of hydrochlorate of cocaine.

Under this treatment the swelling gradually subsided, and in ten days' time the parts had practically assumed their normal appearance.

Case 2. Mr. X., a medical man, aged thirty-eight, sent for me hurriedly one day, as he was complaining of great dysphagia and pain in and around the neck. He had been in his usual good health until the preceding evening, when he began to complain of pain in the throat, accompanied by a marked feeling of constriction. When first seen (the day after the commencement of his symptoms) the temperature was 102° Fahr., the pulse rapid, the skin moist, the tongue furred, and the conjunctivæ congested. Upon examination of the pharynx, both faucial pillars were seen to be markedly congested. The anterior free border of the epiglottis was swollen to at least four times its usual thickness, and was of a dark red livid colour. The aryepiglottic folds, the false cords and the true cords, were also swollen and congested. The cervical lymphatic glands upon both sides were enlarged and painful. Extreme dysphagia was complained of, so much so that at the patient's request all food was given in the form of nutrient enemata. The urine, upon examination, was found to be normal. The patient was very ill for several days, and had all the appearances of a man suffering from an acute dose of septic poison. Small doses of morphia had to be given at intervals to allay the pain and irritability of the throat. The treatment adopted was much as in the previous case: inhalations of steam containing lin. camph. co., pharyngeal spraying with ice-cold solutions of cocaine, and boracic fomentations around the neck. The patient made a slow but satisfactory recovery. The case was, from the first, regarded as of septic origin, and an examination of the drains revealed an appalling state of affairs: imperfect joints, broken pipes, and sewer gas escaping into almost every room in the house.

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## NOTE ON RHINITIS CASEOSA.

By Prof. MASSEI.

ARSLAN,<sup>1</sup> having observed three new cases (?), insists upon the opinion already expressed by him, *i.e.*, to consider the caseous rhinitis a complication of several diseases of the nasal fossæ and annexæ. Although he shows himself to be well acquainted with the whole modern literature, and the late studies of Guarnania, he is not disposed to accord great importance to the *streptothrix alba*, which Guarnania has described and identified.

<sup>1</sup> Dr. V. Arslan.—“Few Words on the so-called *Rhinitis Caseosa*” (“*Au cosa dire parole sulla cop detta Rinite Caseosa*”). “Archivio Italiano di Otologia, Rinologia, e Laringologia,” 5th year, 1897.

As the observation which suggested such researches to Guarnania was made in my own clinic, and under the strict control of Prof. de Graxa, allow me to insist again upon the value of the presence of *streptothrix alba* in true cases of caseous rhinitis. A simple observation could not have the importance I accord if it was not able to confirm, in an indirect way, the presence of a micro-organism in the products of the disease. Guarnania found what had been already observed by other authors. He has, however, the merit (being assisted by the well-known competence of one of the most eminent bacteriologists, Prof. de Graxa) to have recognized as a streptothrix (*s. alba*) the same parasite which had been before so differently named.

We are not at one with Arslan, as we are so strongly convinced of the part of that streptothrix in the production of the caseous rhinitis that when we do not find it we deny having to do with a genuine case. (See Marbuscelli, *Pseudo-Rhinitis Caseosa*, in "Archivio Italiano di Laringol.," Avril, 1897.)

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## BRIEF NOTES OF AN UNUSUAL CASE OF GUMMA OF THE TONSIL.

By ERNST MICHELS, F.R.C.S. (London).

A. J., twenty-eight years, came to the German Hospital, in August, 1894, complaining of a swelling in the left side of his throat. He had been operated on in Liverpool for a similar swelling early in the year, but during the last few weeks had noticed the recurrence of the tumour.

The left side of the pharynx seemed to be filled up by a large, round, globular tumour of the size of a walnut; the surface of the tumour was smooth and almost black in colour. There was no glandular swelling; no signs of syphilis. As the patient was rather restless and difficult to examine, he was put under chloroform with a view to ascertain the extension and the relations of the tumour and to act accordingly. While passing my finger behind and below the tumour, the tissues suddenly gave way and the whole of the tumour became detached, leaving a deep cavity in the left tonsil; there was hardly any hæmorrhage.

During the next few days the walls of this cavity assumed a very unhealthy appearance; gangrenous shreds formed and became detached, and an ulceration of a serpiginous character began to form. Although the patient denied to have had syphilis we felt justified in giving large doses of iodine and mercury, and in a very short time the ulceration healed and the cavity filled up. The patient was discharged three weeks after the removal of the tumour, with the instruction to continue the use of mercury and to attend as an out-patient, but he was never seen again. The tumour was formed by round cells; the outer parts were gangrenous and did not show any definite structure.

### THREE CASES OF INTRACRANIAL COMPLICATIONS ORIGINATING IN THE EAR.<sup>1</sup>

By Dr. E. J. MOURE,

Professor of Otology in the Faculty of Medicine of Bordeaux.

(Translated by Dr. DUNDAS GRANT.)

CEREBRAL complications of otitic origin are far from being uncommon either in France or abroad, but while in our country they generally constitute *post-mortem* discoveries, in other countries, on the other hand—and particularly within the last few years—surgical intervention has been carried out during the course of these complications with the object of suppressing them and consequently of curing the patient. The cases of encephalic abscesses of otitic origin, as well as those of thrombosis of the sinus, or even of suppurative phlebitis, propagated in the jugular vein, which have been operated on with success are extremely numerous in foreign medical literature. In France, on the contrary, it is as much as one can say that a few operators have attempted to interfere in this class of case. Our *confrère*, Dr. Lannois, reported, last year, a case in which operation on an otitic abscess was attempted, but evacuation was not found possible.

M. Broca has recently communicated to the Surgical Society of Paris a certain number of cases of different cerebral complications treated surgically, being relieved and cured by this intervention. In a large number of them this surgeon always follows the auricular route in opening the skull, because, as he says with truth, in this way one passes through the initial lesions which are known towards the secondary complications to which the local lesion conducts the operator.

At Bordeaux, Prof. Lannelongue has had the opportunity of opening a sinus in order to remove a clot which had given rise to the classical symptoms. I have had myself to interfere three times within the present year in cases of intracranial complications consecutive to aural lesions. These are the cases which I am about to narrate; they are all interesting, because each conveys some instruction, either from the point of view of the diagnosis of the lesion itself, or from the results obtained by intervention.

If theoretically it seems easy to recognize the different intracranial complications of otitic origin, it is far from being so in practice; thus extradural abscess, meningitis, and encephalic abscess often give rise to clinical symptoms which resemble each other exactly. Very often, indeed, it is almost by the absence of symptoms that one comes to be able to make the diagnosis.

Of all the cerebral complications, meningitis is perhaps the one of which the lesions are the most easy to recognize, because they are generally diffuse, and bring about external signs which are sufficiently clear

<sup>1</sup> Read before the French Laryngological and Otological Society, April, 1897.

and characteristic (diffuse headache, vomiting, strabismus, contracture, paralysis, etc.). It is sufficient to read the treatises on surgery, and in particular the recent works of Broca and Maubrac, or of Chipault, to see the uncertainty of the symptoms which appear in abscess or phlebitis of the sinus, more especially as those two lesions are found combined together or even exist along with aural meningitis, extradural abscess, etc. Further, in certain cases the changes in the ear or in the mastoid process appear to be sufficient to explain, at least in part, the symptoms observed, and, consequently, to divert the observer from the idea of a deeper complication being present. Thus it happens that, being encouraged by previous successes, one may limit oneself to simple intervention in the region of the middle ear or of those accessory cavities, sometimes even as far as the dura mater, without searching more deeply in the interior of the skull or the sinus for a lesion capable of explaining the clinical phenomena.

We are all the more justified in acting thus because very often fever or unilateral headache are the only signs which lead us to think of the presence of one or the other of the complications of aural disease. I make no reference to the changes found in the fundus of the eye, double or single neuritis, as these signs are often absent in cases of localized cerebral lesions, but, on the other hand, often exist in certain diffused inflammations, such as meningitis, in which operative interference is useless.

There is no doubt that when intracranial surgery for the complications of otitis comes to be practised more frequently among us, as it is abroad, clinical experience will lead us to recognize some, if not all, of these complications and their possible combinations, so that we shall come to know in which cases it is necessary to stop before opening the brain; and those, on the other hand, in which it is our duty to go more deeply, in spite of the existence of morbid changes found in the more superficial parts.

The three cases which I am about to narrate are interesting from this point of view. I will describe them in the chronological order in which I have had the opportunity of observing them.

Case 1. *Suppurative Median Otitis of the Left Ear. Adenoid Vegetations. Cessation of the Discharge after the Removal of the Vegetations. Three months later Measles and Recurrence of Suppuration in the Ear. Alternations of Cessation and Recurrence of the Otorrhœa. Meningitic Phenomena eight months after the Occurrence of Measles. Mastoid Periostitis. Incision; Bare Bone. Trephining four days later. Large Abscesses and Masses of Granulations between the Dura Mater and the Cranial Bone. Recovery.*

(Reported by Dr. BRINDEL, Assistant in the Otological Clinic, etc.)

T. H., aged five years, suffered from otorrhœa of the left ear of several months' duration, kept up by the presence of a large mass of adenoid vegetations in the naso-pharynx. It is now a year since the vegetations were removed, and within a few days after that operation the discharge of pus came to an end, the child in a few months becoming rosy and plump. However, he was attacked with measles

three months after the operation, and his otorrhœa returned, but it yielded in a few weeks to simple injections of boric acid. At that time the membrane healed up completely and the hearing became excellent.

From the month of April to that of December, 1896, he had from time to time attacks of pain in the ear, and a slight discharge from the meatus, but his relatives did not take much notice of these incidents and sought no advice concerning them. Towards the middle of December, however, the child was suddenly attacked with severe meningitic symptoms, which made it necessary for him to be kept in bed for eight hours, causing great anxiety for his life. He recovered, however, in a very short time, the improvement starting from the day that the purulent discharge reappeared in the ear. A few days later a swelling appeared in the region of the mastoid process, and particularly in the peri-mastoid tissue. There was some rise of temperature at night; the auricle was projected forward, and it was tender on pressure, as was also the tip of the mastoid process. The appearance suggested a simple mastoid periostitis, and under bromide of ethyl the actual cautery was applied to several spots on the mastoid. From this time the swelling became less diffuse, it narrowed itself, and in two days presented the appearance of a rounded prominence, situated two and a half or three centimètres from behind the auricular attachment at the level of the lower third of the mastoid process, immediately behind this. At the most prominent point there was distinct but deep fluctuation. An incision was made on December 24th, and pus was evacuated from below the periosteum. It was thick, white, and laudable. A grooved director passed into the bottom of the wound was found to penetrate the bone, so that the presence of caries was assured. Drainage and antiseptic dressing were the only further treatment carried out for the time. After two days the pus ceased, but there still continued a slight rise of temperature at night. During the day the appetite was good, the child was in excellent spirits; but in the evening he experienced a slight rigor, followed by a feeling of heat and general agitation. On the 28th the child was brought to the clinic in the same state, and it was decided to take him into the children's hospital for the purpose of operation.

The operation was performed on the 30th of December. The child was in good spirits playing with his toys, and the first idea was to limit all intervention to a simple enlargement of the wound under chloroform, and scrape the carious bone. An incision from five to six centimètres long was made, with its axis parallel to the auricular fold, but including the former wound, and the periosteum was pushed backwards and forwards. There was then found in the retromastoid groove, at the junction of the inferior and middle thirds of the process, a small fungating point, which was the orifice of a fistulous track, through which a probe could be passed into the cranial cavity. Guarded by Stacke's protector, this fistula was enlarged by means of the gouge and mallet, and a quantity of pus of the same sort as that described above was evacuated. A large cavity filled with granulations, covering the lateral sinus, and rising and falling with the pulse, was thus laid open. The granulations were scraped away. The wall of the sinus and the internal surface of the cranial wall were touched with a ten per cent. solution of chloride of zinc. The opening extended to the latter extremity of the mastoid process, of which quite a third was removed, so that the antrum opened freely into the cranial cavity. A large drainage tube was introduced into the wound and kept there by means of a suture, the incision being closed above and below the drain by means of stitches. A large dry dressing was applied. On the evening of the operation the temperature was 38.2. Next day the temperature was, in the morning, 37.5; in the evening, 38.5; and on the following morning, 37.8. On the 2nd of January, 1897, the child was pretty well, the morning temperature being 37.4, and the

evening one 38·1. The dressing was changed, and a small quantity of pus could be washed out through the drainage tube. Three or four of the cauterized spots had supplicated and infected one of the stitches. Two stitches were removed. The body was covered with an urticarial rash, attributable to the iodoform. This drug was therefore omitted, and salol used in its place. Next day the urticaries had disappeared; the temperature was, in the morning, 37·6, and in the evening, 37·8; on the 4th of January, 37·4 and 37·6. The dressing was then changed; one of the cauterized spots was suppurating; the rest of the stitches were removed, the wound being found to have united. The child had been up during the last two days; the tongue was clean, the appetite good, and the patient had got tired of being in the hospital. Very little pus could be washed out, and the salol dressing was re-applied. From this time there was no more furrishness. The dressing was changed twice a week, and the pus diminished rapidly in quantity.

On January 17th the drainage tube was withdrawn, after having been gradually shortened. The child had greatly improved in condition, and the wound was healing rapidly. Rapid improvement took place. A few granulations had to be cauterized with nitrate of silver, the original track was swabbed with chloride of zinc, and on the 2nd of February no more bare bone could be felt with the probe. On the 10th of February the granulating track was cauterized with chromic acid. On the 15th there remained nothing but a dry crust on the orifice of the drain track. There was no tenderness on pressure, the child was in good health, and subsequently became perfectly well.

In the second case the patient was a woman, from whose cadaver anatomical preparations were removed at the *post-mortem* examination, and demonstrated before the Anatomical and Physiological Society of Bordeaux by Dr. Bosquet, who at the same time reported the clinical history of the case up to the time of my intervention.

Case 2. *Mastoid Osteo-Periostitis. Extradural Abscess and Cerebral Abscess. Petro-Mastoid Evacuation. Death. Autopsy.*

Dr. BOSQUET's account of the case is as follows :—

I have the honour of exhibiting before the Anatomical Society the brain of a patient who died in Dr. Chambrelent's ward in the part set aside for accouchements. There is an abscess in the left sphenoidal lobe consecutive to median otitis. The patient entered the Hôpital St. André on the 10th of last month, accompanied by people who were unable to give any particulars concerning her; she was herself incapable of replying to any questions, and was in a semi-comatose condition; she was continually delirious, without fever, and had nearly completed the ninth month of gestation. In the ward her delirium became violent and ambulatory; she was thought to be affected with puerperal mania. On the 13th of March labour began and the patient was sent to the maternity department, when a slight degree of albuminuria was discovered, and it was supposed that the delirium was uræmic. The labour was rapidly terminated by means of the forceps applied as soon as the degree of dilatation permitted. The child was alive and well formed, and is at present in perfect condition in the Children's Hospital.

On the 15th of March the patient was removed to the isolation ward on account of the delirium, which prevented her from being allowed to remain among the other maternity patients. She had there some degree of fever, and on the evening of the 16th the temperature was 39·6°; there was constipation, but no vomiting. The pulse was rapid, there was a calm delirium, and slight contraction of the muscles of the nape of the neck.

The diagnosis was held in suspense, when, on the 18th of March, there was

noticed on the patient's ear some stains of pus issuing from the right external auditory meatus. It was then elicited from the relations that at ten years of age she had suffered from suppurative otitis, which had led to the complete loss of the hearing of the right ear, and that from time to time she had had pain in the ear; also that a week before her entry into the hospital, while she appeared in perfect health, she was suddenly seized with pain in this ear, radiating over the temporal fossa of the same side and accompanied by delirium, the persistence of which had led them to bring the patient to the hospital.

The presence of pus in the ear and the former history of the patient then suggested the supposition that the various symptoms which she presented were due to a lesion, the point of origin of which was the ear.

Dr. Moure was called to the case by Dr. Chambrelent on the 19th of March, when he found a collection of pus and a sequestrum in the ear. There was at the level of the root of the zygomatic arch a subcutaneous purulent collection which appeared to come from the ear. Pressure on the mastoid process caused great pain. There was obviously a purulent median otitis, but the question arose as to whether the lesion was confined to the ear. There were no clear signs of abscess of the brain or of meningitis; simply headache, delirium, an oscillating temperature, and optic neuritis, more marked in the right eye, as confirmed by Dr. Fromaget.

Dr. Moure decided to operate, and on the 20th March performed petro-mastoid evacuation. A purulent track was found leading from the vault of the cavity of the tympanum; it was followed up and enlarged, and it led through the middle cerebral fossa to an extradural abscess. At this point the dura mater over the extent of an area the size of sixpence was reddish and devoid of expansional movement, while all around it was attached and healthy in appearance.

It was curetted and punctured; but the bistoury, inserted to the depth of a centimètre and a half, did not lead to any escape of pus. The operation was completed by tamponning with salol gauze and suturing the soft parts.

The delirium and fever persisted, and the patient died on the 21st of March, thirty hours after the operation.

At the autopsy, which was made on the morning of the 22nd, there was found an abscess of the brain continuous with the lesion in the ear; the dura mater, though granular at the part indicated, was not perforated. The site of the puncture made with the bistoury could be traced, and the absence of escape of pus was to be explained by the formation of false membranes which increased the thickness of the meninges, while in order to reach the pus the instrument would have had to be inserted to a depth of from one to two centimètres. Over the second and third temporal convolutions, for an area of five centimètres, the cortical substance was compressed and greyish in colour; it gave way when the pia mater, which was adherent to it, was lifted, and the cavity of the abscess was thus laid open. There was free continuity with the lateral ventricle.

On transverse section it was found that the third and fourth ventricles had escaped, and that the abscess, having a length of five centimètres and a height of three, was of such a depth as to reach from the cortical surface to the lateral ventricle. The purulent contents of the abscess were greyish, but a close examination was not made, and there was found at the same time thrombosis of the right lateral sinus.

I ask the opinion of the Society as to the probable age of this abscess. The woman was delivered on the 12th, and died on the 21st; the abscess was probably in existence before the confinement, and did not prevent the period of gestation continuing to the normal term.

It is easy to recognize that in this case I interfered too long after the commencement of the disease for me to judge of the efficacy of my first operation, and to perform a second one in the way I had proposed. Events followed each other with such rapidity that the patient unfortunately succumbed before I was able to reach the interior of the skull, in order to search for a lesion capable of explaining the persistence of the clinical symptoms after the opening of the antrum and the evacuation of the extradural abscess. It was necessary in addition to take into account the puerperal condition of the patient, having gone through the process of parturition five days before, and consequently being highly susceptible to infection subsequent to the birth of her child. Before we had time to eliminate this important element in our hypothesis the patient died, from the sudden bursting of an enormous cerebral abscess into the ventricles. Even if I had at the time of the first operation found pus in the brain and evacuated it from this large cavity, the patient would probably nevertheless have succumbed, because the surrounding cerebral substance was in such a state of softening that her recovery was not even to be thought of.

At the same time this case is interesting from the point of view of the course of the symptoms and of the fact that the ear had allowed itself to be completely forgotten up to the moment of parturition. In fact, during the inflammatory period all sorts of lesions were thought of, such as mental or other troubles, but there was no idea of any possible complications arising in the ear. It must be admitted, at the same time, that symptoms of mental alienation during the course of cerebral abscess are so rare that the ear might very well have escaped attention even in their presence. In addition, the suppuration from the ear was extremely slight, as is usual in cases of complication, and there was only the fœtor to awaken the suspicion of the medical attendant.

The case is interesting on account of the slow, insidious development of this enormous abscess, by the hyperthermia and the acceleration of the pulse, instead of the hyperthermia and slowness of heart's action which is often observed in these cases. Again, although there existed an old thrombosis of the superficial cerebral veins, and, in particular, of the lateral sinus, it was obstructed by an organized clot, of which the limits were not noted at the time of autopsy. We found no external sign which could lead us to think of the existence of this complication. This point is classical, because in most cases cerebral abscesses of the temporo-sphenoidal lobe are complicated with phlebitis, or at least with thrombosis of the lateral sinus. Further, whenever one sees an abscess in the course of an intracranial operation, the sinus ought always to be exposed, in order that its condition may be tested. These are the anatomo-pathological pieces of information which it is necessary to possess, because in general it is impossible to establish one's diagnosis entirely on the clinical symptoms, and in a case of this kind it is necessary to recommend the friends to allow of an operation.

The third example which I had the opportunity of observing at the same time as the woman of whom I have just spoken occurred in a young child, whose clinical history is equally interesting because it presented certain diagnostic difficulties and led to the postponement of interference.

*Case 3. Measles. Suppurative Median Otitis. Phlebitis of the Lateral Sinus. Petro-Mastoid Evacuation. Opening of the Sinus. Death.*

M. X., aged thirty months, had in the previous January had an ordinary attack of measles, which was complicated with broncho-pneumonia, threatening the child's life. He had scarcely recovered from this complication when he was attacked with pains in the ear, followed soon after by a discharge of pus, which did not take long to come to a termination, and give rise to the idea that a complete cure had taken place. However, the fever persisted, reaching the height of  $39\frac{1}{2}^{\circ}$ , and even at times to  $40^{\circ}$ . In the presence of these symptoms the practitioner in attendance called into consultation Prof. Piéchaud, of Bordeaux, who, after having examined the child and heard the account of its complications, thought that the condition of the ear might be the cause of the persistence of the fever, in spite of the complete cessation of discharge. I was then called in to see the little patient on the 20th of March. At my first examination I found the child fairly cheerful, free from any sign of pain on pressure either on the mastoid process or in any other part of the skull; but the medical attendant told me that two years previously he had had a somewhat violent rigor, accompanied by a rise of temperature to the height of  $40^{\circ}$ . From that time the febrile symptoms persisted with considerable intensity, but there were no further rigors, and within twenty-four hours the child appeared to have improved considerably. I examined the ear and found the tympanum red, and bulging strongly outwards; the neck was quite free from rigidity, there were no ocular symptoms, nor any other general disturbances. I then proposed to make a free opening through the membrana tympani, to give exit to the liquid which was certainly confined in the cavity. This operation was performed under chloroform. I effected a wide myringotomy, which was followed by the expulsion of a certain quantity of thick non-fœtid pus. It was decided then to wait for forty-eight hours in order to judge of the effect of this intervention, and if at the end of that time the fever had not disappeared, a more extensive operation, namely, the free opening of the mastoid process, was to be carried out.

Two days later, the fever symptoms having persisted with the same intensity, I performed the operation of which I have spoken, with the assistance of Prof. Piéchaud and the medical attendant. We found the bone hard, but inflamed, bleeding easily and traversed by emissary veins, which during the operation emitted such a considerable quantity of blood as to render the proceedings somewhat difficult. The mastoid antrum was absolutely full of pus and granulations. The surrounding bone was the seat of a slight osteitis, and was carefully curetted and swabbed with a ten per cent. solution of chloride of zinc. The auricle was re-united by means of stitches, and drainage was carried out through the meatus. The cartilaginous part having been slit up, and the posterior osseous wall resected, all went well for forty-eight hours, but, nevertheless, the febrile phenomena persisted with almost the same intensity as before. Under these circumstances I explained to the family my fear that there was a deeper complication, which, if it did not affect the meninges, involved the surroundings of the sinus, or the sinus itself—in short, I spoke of pyæmia of sinusal origin. In spite of this they begged me to endeavour to find in the dressing some sign of suppuration which would explain the febrile phenomena. Forty-eight hours after I found the wound in perfect condition, apparently tending to close. Two days later, the symptoms persisting continuously, I again undid the dressing, and this time I found the antrum full of pus, and the stitches suppurating. I opened the wound freely, so as to afford easy exit for the suppuration.

My colleague and friend, Dr. Lagrange, now made an ophthalmoscopic examination, and found the fundus normal without the slightest trace of paralysis of

accommodation. For the moment one thought that the febrile state might be attributed to the infection of the wound, and at the instance of the parents, while against it, I consented to postpone for three days any further intervention. This examination had taken place on a Sunday, and the practitioner in attendance came to me on the following Thursday stating that for the last forty-eight hours the condition of the child had got considerably worse. The thermometer scarcely ever descended below  $39\frac{1}{2}^{\circ}$ , and the attacks became more numerous. The little patient, who up till now had been lively, and had played about on his bed, was depressed and answered less readily to questions. I proposed then the carrying out of the intervention of which I had spoken, namely, making an opening through the skull into the cerebral fossa, and if nothing was found at this level then exploring the sinus, which I suspected as being the seat of the chief cause of the trouble. In view of the aggravation of the symptoms the family consented, and the operation was carried out on the Friday morning with the assistance of Prof. Piéchaud. The child having been put under chloroform, and the wound widely opened, I immediately attacked the osseous wall and exposed the meninges in the cerebral fossa. These appeared to be absolutely healthy, although the superficial veins were slightly congested.

Before advancing more deeply in this direction I attacked the wall of the sinus with the full conviction that it was there that I should find the origin of the infectious phenomena characterized solely by the thermometrical tracing which we had before us. Even at this time we had no external sign of phlebitis or of thrombosis; not the slightest rigidity of the neck, nor any lesion along the line of the jugular vein; in a word, no other symptoms but the intense fever. The bone was extremely thick, it bled very freely and abundantly—to such a degree that I was considerably obstructed by the flow of blood during the whole operation, hæmorrhage taking place at each touch of the gouge, just as if the sinus had been opened. Meanwhile, I succeeded in clearing away the osseous tissue, and opening the cranial cavity at the level of the sinus. Scarcely had I broken through the partition which separated me from the dura mater when a flow of pus took place. I enlarged the orifice, and the pus continued to bubble out just as blood coming from the sinus would have done; in fact, it spurted just as if there had been a large artery behind the pouch of the abscess. Little by little it emptied itself, and with all the greater facility as I enlarged still further the opening in the cranium. The blackish hæmorrhage which had accompanied the exit of pus at the beginning soon ceased of itself, and I was then able to make out that the pus issued not from the wall of the sinus, but from the interior of its cavity. We were in the presence of a suppurative phlebitis which, in view of the lateness of the intervention, rendered the prognosis very grave in spite of the opening of the abscess. I placed several threads of catgut to act as a drain in the interior of the cavity of the sinus, and plugged the wound with iodoform gauze, leaving room for free drainage, so as to make sure of the easy exit of any discharge, and to allow of antiseptic irrigation being carried out. Unfortunately, the general state of the child was at this moment so bad, and the infection so severe, that death took place thirty-six hours later.

This third case is interesting on account of the course of the disease, which was characterized by the absence of any symptom pointing to a sinusal complication of otitic origin, except the temperature chart, which was sufficiently characteristic of an infective process, and which alone led me to think of a lesion of the kind and to propose at once the addition of surgical measures. Unfortunately, it is not always easy to induce the family to admit of an operation which may be dangerous and is often

thought to be useless, because it is impossible to affirm, absolutely, the certainty of one's diagnosis, and, consequently, to hold out convincing hopes that the intervention may be of benefit to the patient. On the other hand, we must not be surprised at the want of success of our operative intervention in these cases, because pyæmia of sinusal origin may be justly considered one of the gravest complications of chronic or acute suppurative inflammation of the middle ear.

I shall not dwell upon the interest of this case from the point of view of the course of the symptoms, the suppuration having subsided, subsequently, to such an extent that the membrane had cicatrized completely, but with a collection of pus and granulations behind the cicatrix which worked their way into the interior of the cranial cavity, instead of discharging outwardly and drawing the attention of the medical attendant.

There is no doubt that, if at the time of my previous visit, instead of a simple red bulging of the tympanic membrane, I had found a purulent discharge, I would have operated on the mastoid process, and thus gained forty-eight hours, though possibly it might not have been sufficient to enable me to save the patient's life, in view of the difficulties offered by the family and the medical attendant, who would have opposed my interfering before the general symptoms were too far advanced for operation to bring about a good result.

In this third case we have an illustration of complications of the sinus, different from each other, which manifested themselves simply by the pyrexia, more especially in the first and third cases. In the first case the abscess was extradural, but in the third, on the other hand, it developed in the interior of the sinus and affected the entire circulation. As I said at the commencement of my remarks, these cases are sufficiently rare among us to justify their narration in detail when one has the opportunity of observing them, whatever may be the final result of operative interference. These cases confirm the important point insisted upon by M. Broca, after Wheeler, at the time of his last communication to the Society of Surgeons, namely, that in presence of intracranial complications of otitic origin, we must commence with the ear, allowing ourselves to be guided by the lesions we meet inwards to the interior of the brain. An operation thus carried out is easy and simple, and it is possible to enlarge the opening made in the skull to whatever extent we wish, so as to examine either the sinus or the meninges of the cerebral fossa, or even to puncture the interior of the brain in various directions so as to make sure that there is no pus. In regard to this point I will recall a slight incident to which M. Lannois drew our attention last year, namely, the clogging of the interior of the hollow needle by cerebral matter during the search for pus. I think it is most necessary in these cases to use a fine trocar and to practise slight aspiration, with perfectly aseptic instruments, as, of course, goes without saying. Further, before opening the lateral sinus in a doubtful case, it is wise to make a capillary puncture with aspiration to see whether the channel contains blood or pus, or whether, on the contrary, it is thrombosed and ought to be laid open and cleaned, with or without previous ligature of the jugular vein as the nature of the case may demand.

*Dundas Grant.*

## SOCIETIES' MEETINGS.

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### BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

July 16th, 1897.

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Dr. MILLIGAN, *President, in the Chair.*

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Dr. GEORGE STOKER showed—

Case 1. A boy, aged seven, who had suffered with double chronic suppurative otitis media since birth; had been treated in various ways without success; was quite deaf; has been treated with oxygen for five months; discharge has quite ceased in one ear, and almost ceased in the other, and hearing with watch is now four inches.

Case 2. A boy, aged nineteen, with (a) ozæna in left nostril since birth. After two months' oxygen treatment there is neither smell nor crusts. (b) Patient has also had double chronic suppurative otitis media for fourteen months. Various remedies had been tried—*i.e.*, alcoholic and boric acid drops, insufflations, etc.—but without result. After two months' oxygen treatment, left ear is quite well, and right ear nearly so. Dr. Stoker showed his new ear-caps for applying oxygen.

Case 3. Patient, aged forty-five, had suffered from lupus of nose for four years; had been scraped several times, and various acids, etc., had been applied. The lupoid surface was scraped and filed, and all diseased tissue removed, and oxygen applied with a face-piece. She is now quite well. There is at present no sign of a return of the disease, and the new skin looks healthy.

Case 4. Patient, aged eighteen, has had lupus on his face for fifteen years. Has been scraped several times, the right side of his face being a mass of scars. The extent of disease treated by oxygen was right side of nose and inner third of lower eyelid. Case shown to demonstrate the difference between ordinary cicatrization and new tissue produced by oxygen.

In reference to Cases 3 and 4, Dr. Stoker showed a section of skin removed from an "oxygen cicatrix," and read the report of the Clinical Research Association on the same, which declared it to be "epidermis and true skin."

Dr. ROBERT H. WOODS (Dublin) said that in his opinion one of the cases submitted as lupus of the nose was not a case of lupus at all, but of syphilis. The age of the woman was thirty-five, the trouble was only of two years' duration, and he believed with Kaposi that true lupus never began after puberty. Further, he believed that if mercury or iodide of potassium had been administered the case would have got well, without local treatment. Since, however, no antispecific remedies had been

applied, and yet the patient was cured, it must be looked on as a score for the oxygen treatment.

Dr. MACNAUGHTON-JONES desired to know from Dr. Stoker what were the particular advantages of the oxygen treatment in otitis media over the other well-accepted and multifold means of treatment with which they were all familiar. Was the oxygen treatment pursued quite independently of any of these, and what were the particular forms of the affection in which this treatment was specially indicated? He (Dr. Macnaughton-Jones) had always found that the main trouble in the treatment of otitis media consisted in the difficulty of keeping patients under observation for a sufficient length of time, in order to enable the local treatment to be efficiently carried out. The time absorbed in the application of the oxygen treatment, if given up to any of the other local antiseptic methods, would, in all probability, end in a cure. Before accepting the oxygen plan, we should know its special advantages and the feasibility of its application in ordinary practice. As to ozæna, he had been tempted to give it an exhaustive trial, lasting over some months, with Dr. Stoker's apparatus, in an obstinate case. The only result had been that the young lady had largely added to her literary culture while carrying out the treatment, for she had absorbed more literature during the application of the gas than at any previous period of her life.

Mr. STGEORGE REID drew attention to the fact that, if the success was due to the action of the oxygen, the result should be directly proportional to the purity of the gas employed; and pointed out that, whereas in the first instance the apparatus shown by Dr. Stoker admitted of a considerable contamination of the gas with ordinary air, the instrument now exhibited permitted the gas or gases to be applied to the affected part with little if any leakage, and inquired if Dr. Stoker had noticed a corresponding improvement in the cases under treatment this would lead one to expect.

Dr. STOKER, in reply, stated that the gas employed was a mixture of oxygen and purified air, as it had been found that pure oxygen was too irritating to be employed alone. With regard to Mr. Woods' remarks, the growth had frequently been examined, and all authorities had agreed that it was a case of lupus.

Dr. MILLIGAN showed a large *Exostosis* removed from the right nasal passage of a male patient, aged sixty-nine.

The symptoms complained of were obstruction of the right nasal passage, discharge from the nose, and constant right-sided epiphora. Examination showed that the right nasal passage was blocked, partly by a soft mass of polypoid tissue, and partly by a hard bony growth. The growth projected upwards through the right lachrymal bone, causing displacement of the lachrymal sac, which was distended and painful.

An attempt to remove the growth through the nasal passage was unsuccessful. The patient was accordingly put under chloroform, and an external incision made along the side of the nose. In this way the growth was readily exposed. It was found to have sprung from the under surface of the right orbital plate of the superior maxillary bone; to have

grown upwards and outwards, so as to destroy the lachrymal bone and produce lachrymal obstruction ; to have filled the antrum, and to have almost filled the right nasal passage. Its pedicle, which was about one



quarter of an inch in length, had become gangrenous, and the exostosis lay partially free in the large cavity it had formed for itself. After considerable traction and pressure it was drawn downwards and then lifted bodily outwards through the external incision. The patient made a good and rapid recovery. The exostosis measured one and a half inches long and one and a quarter inches broad, and weighed nine drachms.

MR. JOHN BARK. *Case of Epithelioma of Right Vocal Cord; Thyrotomy.*

The patient, a man, aged forty-one years, presented himself for treatment on February 23rd, 1897. He complained of hoarseness, which commenced about two years ago, and had since gradually increased. He was a man of powerful physique, with good general health, and with no points in his family history bearing upon the present case. The voice was strongly dysphonic.

The laryngoscopic image showed a greyish white papillated growth involving and invading the substance of the anterior two-thirds of the right vocal cord. There was no ulceration, and the mobility of the cord was unimpaired.

On March 21st, 1897, laryngo-fissure was performed, and the whole of the right cord, ventricular band, and arytenoid cartilage removed. Hahn's tube was used at the operation and left *in situ* for forty-eight hours. It was then replaced by an ordinary tracheotomy tube, which was finally dispensed with on the seventh day. Swallowing could be performed with comfort on the day following the operation. Recovery throughout was uneventful, and the patient was discharged from hospital on April 14th.

When last seen on July 9th the general health was good, the voice husky, but strong and serviceable, and the laryngoscope showed no sign of recurrence of the growth.

MR. NEWBOLT'S *Report on the Growth*.—The parts removed consisted of two portions, the one including the main portion of the growth, and the other its hinder limits, together with the right arytenoid cartilage. The growth itself was of greyish white colour, hard, papillated, circumscribed anteriorly, and shading off into the tissues posteriorly.

Microscopically, the growth showed a large number of cell nests penetrating towards the thyroid cartilage, but separated from it by unaffected tissue. The anterior margin was abruptly defined; the posterior not so marked. The papillated free surface was covered in the greater part by squamous epithelium. Examination of both portions showed that the whole of the growth had been, to all appearances, removed.

MR. LAKE. *Disease of Larynx for Diagnosis.*

The author gave the following history. The patient was a sailor of fifty-four years of age. He complained of hoarseness since January, 1897. He had fixation of the left vocal cord and a swollen red appearance of the right, which was at a higher level than the other, and moved badly. The patient had had syphilis fifteen years ago, and had no pain. He had been on iodide of potash since first seen, twelve days ago. The left cord now moved slightly.



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*September, 1897.*



DR. GRANT'S CASE OF POST-NASAL POLYPUS.

Dr. BARK thought the appearance of the right vocal cord was suspicious, and that probably thyrotomy would have to be performed.

Mr. R. H. WOODS considered that this case was probably not a malignant one. The right vocal cord was uniformly enlarged, slightly red, and not ulcerated; and, in view of the admitted history of syphilis, he thought it would not be justifiable to operate at present, but in the first instance to administer mercury and be guided by the change in the appearances in determining the treatment.

Dr. PEGLER. *A Case of Nasal Obstruction, with Moriform Hypertrophies growing from the Free Border of the Septum.*

T. L., aged twenty-three, was sent to the Metropolitan Ear and Throat Hospital from Dover in July, 1897, complaining of defect of speech.

Examination showed this to be apparently due, primarily, to an extremely high roof to the mouth, aggravated by an absolute paresis of the soft palate. This latter condition was easy to account for. Posterior rhinoscopy showed two large vertically elongated moriform growths projecting into the naso-pharynx from close to the free edge of the septum on either side, concealing the whole of it, except at one point near the roof, and apparently occluding both choanæ. The little breathing space that remained was occupied by posterior inferior turbinal moriforms bilaterally. The right inferior turbinal was hypertrophied in its entire length, and there was a moriform body at the posterior extremity of the right middle turbinal. The left nasal fossa was blocked by a crest spur on the septum.

So far I have removed most of the obstruction to nasal breathing by taking away the hypertrophies of the inferior turbinals anteriorly and posteriorly, and also the septal spur.

I have also commenced an attack on the septal growths, so that their posterior free and rounded surfaces no longer appear as they did originally. I removed the projecting portions with a Morell Mackenzie snare through the right nasal fossa. By way of the left I could not get anything off, either with or without the assistance of a finger in the naso-pharynx. I have, however, desisted doing anything further these few days, as I wished to show the case at this meeting. I do not think they are common, but I believe both Dr. Dundas Grant and Dr. Hill have had cases. I think of taking off the remaining mass with the spokeshave, unless any Fellow present can suggest a better plan. I do not expect to do much more with the snare.

The nasal breathing is now practically free, the palate is much more active, and there is some improvement in speech in consequence. I should be glad to know the best kind of appliance, if any is to be had, for adaptation to the roof of the mouth (by the dentist) for further lessening the speech defect.

Dr. DUNDAS GRANT. *A Case of a Post-Nasal Growth hanging down into the Oro-Pharynx.*

The patient was a boy, aged twelve, who for two years had experienced an obstruction in the left nostril. A fortnight ago, while playing

among straw, he suddenly felt a lump of some sort in the back of his throat. On inspection through the mouth, there is seen a rounded growth, hanging down behind the left half of the soft palate, the visible portion resembling the tip of a small strawberry, the surface being somewhat rough and papillated. By means of a probe it can be made out that the growth is perfectly free from the soft palate, and on digital palpation it can be traced as nearly as possible to the region of the middle turbinated body, the surface of the upper part being smooth to the touch, and the consistence of the growth similar to that of an ordinary polypus. Through the left anterior naris a considerable portion of the growth can be seen, and it presents the ordinary smooth, white, shiny appearance of a nasal polypus. It was therefore assumed that the growth was an ordinary nasal polypus which had become dislocated into the nasopharynx, the presenting surface having undergone changes due to exposure and friction.<sup>1</sup>

*On Preliminary Training and Methods of Operating in Laryngeal Growths per vias naturales.* Opened by Dr. MIDDLEMASS HUNT. (See JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY, Aug., 1897, pages 420 to 426.)

#### DISCUSSION.

Dr. DUNDAS GRANT congratulated Dr. Middlemass Hunt on the excellence of his paper. He agreed with him that it was quite possible that expertness in the use of laryngeal instruments had diminished since the introduction of cocaine, and, he would add, the diminished use of laryngeal brushes since the construction of sprays had attained such perfection. He thought that too little use was made of the laryngeal probe, which was a means of acquiring dexterity in the manipulation of instruments in the larynx, and was even of considerable diagnostic value. Practice on a throat like that of the well-known Frau Gelle, of Vienna, was extremely valuable, but, of course, it more nearly approached the conditions of practice on the model than on the sensitive patients with whom we have to deal. He, however, strongly recommends the use of Baratoux's electric laryngo-phantom, of which he had himself made considerable use. Dr. Middlemass Hunt had taken exception to the term "safety" applied to the speaker's endolaryngeal cutting forceps, quoting one of his (Dr. Grant's) published cases, in which the ventricular band had been cut. Dr. Grant fully admitted that it was possible to cut a portion of the ventricular band, but if the forceps were kept exactly in the middle line and the ventricular band was not œdematous this possibility was reduced almost to a vanishing point, and, indeed, the injury thus produced was practically of no moment. If Dr. Middlemass Hunt wished to limit the term "safety" with mathematical precision, Dr. Grant accepted the criticism freely; but he claimed for the forceps a relative degree of safety, which, as compared with the unguarded cutting forceps, was so enormous as to amply warrant the use of the name. While fully agreeing with Dr. Hunt that the use of intralaryngeal forceps should be confined to skilled persons, he saw no reason for throwing away any element of

<sup>1</sup> Since the exhibition of the case the growth has been removed, and the above description confirmed; but there was, however, a second polypus of the ordinary character.

safety by which the expert as well as the beginner might profit. Many had made use of the instrument, and he hoped that Dr. Middlemass Hunt, who had not yet made trial of it, would be induced to do so. A gentleman who, without experience in laryngology, had been placed in charge of a throat department, had borrowed Dr. Grant's forceps for the purpose of endeavouring to remove a growth in a case which had come under his care, and he wrote to say that by means of the instrument he had removed a small growth without the slightest difficulty. Too much must not be expected of the instrument, and it should only be employed in appropriate cases—namely, those in which there is a growth springing from the edge of the vocal cord or below it. For growths in the anterior commissure the snare was the instrument to be selected; while for those in the posterior commissure either the snare or the curette, or Dr. Grant's antero-posteriorly opening cutting forceps might be used. He was not, however, very fond of his own instrument for this particular region. For growths above the vocal cords he used Dr. McNeill Whistler's forceps, which had all the advantages of the ring forceps, but, being manipulated like Mackenzie's cutting forceps, was convenient for those who had practised with Mackenzie's instrument. The objection to the ring forceps was that during the closing of the blades these were drawn up away from the tumour, and a certain amount of allowance had to be made for this degree of withdrawal, the amount of which was difficult to judge of by means of the mirror (distance in a straight line being invisible), although, no doubt, with practice it could be allowed for. Dr. Grant had with his instrument frequently removed the growth at the first sitting and without any previous training whatever on the part of the patient. The advantage of an instrument admitting of this seemed obvious. The catheter curve had a great deal to recommend it and would probably come more and more into vogue, although for those who had used Mackenzie's instruments a curve more approaching a right angle was more convenient.

To prevent the regrowth of papillomata in the larynx some chemical caustic was advisable. Dr. Grant had made use of tincture of thuja, strong solutions of iron, and absolute alcohol, but had found none of any effect except solutions of salicylic acid in alcohol, from which, however, he had seen the greatest benefit accrue.

He alluded to the great value of Dr. Middlemass Hunt's paper, and expressed his regret that so few of the Fellows of the Association were present to listen to it.

Mr. BARK considered that the best work could be done with the instruments to which one was accustomed. He had found Grant's forceps very useful in the removal of growths on the edges of the cords.

Mr. LENNOX BROWNE. *A Case of Epithelioma of the Soft Palate* (read by title).

Mr. G. H. A., aged forty-eight, a sugar planter, residing in Barbados, consulted me on June 15th last, with the following history.

He married at twenty-four years of age. He is the father of one child—a girl—aged thirteen, in perfect health. This is the only offspring, nor had his wife had any miscarriages.

With the exception of a slight attack of dysentery, the patient had excellent health in the West Indies, but he admitted to free living and indulgence in both alcohol and tobacco, the latter in the form of cigars.

He has lately become greatly emaciated, and his weight on the day of my first seeing him was ten stone six pounds.

There was little pain, and really no inconvenience in deglutition, difficulty in articulation being the most prominent symptom.

On examining the throat the whole of the soft palate was seen to be greatly infiltrated, and the seat of a warty growth. The uvula was greatly thickened, and had lost its power of retraction. The growth extended to the faucial pillars, but did not appear to greatly involve the tonsils. There was little or no glandular enlargement.

The limits of the disease were clearly defined by the boundary between the hard and soft palate. The tongue was free in its movements, and the larynx was healthy. There was slight obstruction of the left nostril, but it was made clear that the disease had not extended to that region.

The family history recorded the death of the patient's father at the age of sixty-three, from exhaustion following an operation for "sarcoma of the knee."

His mother is living, aged seventy-four, but had twice undergone operation for the removal of a recurrent tumour in the breast, once in 1887 and again in 1895.

June 19th : Operation. Dr. Macintyre, of Glasgow, was present.

Chloroform was administered by Dr. Holloway, and an attempt was made to remove the growth with the head extended downwards and backwards, but on account of a difficulty in opening the jaws—later ascertained to be a congenital defect—this was found to be impossible. The patient was therefore allowed to partially recover from the anæsthetic, and cocaine was freely applied locally. The patient was then placed in the upright sitting position, and the whole of the growth was successfully removed by scissors.

There was little or no pain, as the patient was still under the influence, not only of the cocaine, but also, to some extent, of the chloroform. The hæmorrhage was very slight, the wound healed quickly and without a bad symptom, so that the patient went home in eight days. He had lost only two pounds in weight.

However, eight days later still he had recovered two pounds on his weight on admission, registering ten stone eight pounds, and this he has continued to hold.

The portion removed weighed four drachms and three grains, and the following is Mr. Wingrave's report on the microscopical characters.

"The specimen consists of typical stratified epithelial growth, with small cell tissue. Horny 'pearls' are very numerous, and there can be no doubt whatever as to its malignant nature.

"On making a section at right angles, at two or three sites of the margin of removal, it is seen that the diseased portion has been entirely removed."

Dr. DUNDAS GRANT. *A Case of Cholesteatoma of the Attic with Spontaneous Dehiscence of the Outer Wall imitating Stacke's Operation.*

Dr. Dundas Grant showed a case of old-standing otitis with tinnitus aurium. When seen a few weeks ago there was a mass of epithelial *débris* covering what appeared to be the membrana tympani. It was found, however, that it could not be detached, and drops of carbolized glycerine were instilled. After a week it was possible without any great difficulty to remove a large cholesteatomatous mass from the region of the attic of the tympanum, above the level of the short process of the malleus; it was then found that the outer wall of the attic, as is seen at present, had almost completely disappeared, leaving the interior of that cavity and the opening into the antrum freely exposed to view.

This condition is that produced by an ideally perfect Stacke's operation in which the ossicles had been left undisturbed. The head of the malleus and the body of the incus can be seen covered by a thin cicatricial membrane.

Dr. DUNDAS GRANT. *A Case of Anterior Projection (Lordosis) of the Cervical Vertebrae simulating Adenoids.*

A candidate for a public appointment was referred to Dr. Grant on account of the defective tone of her voice, which resembled that of a subject of adenoids. No such growths were found, but there was an extreme forward projection of the cervical vertebrae—probably the atlas in particular. This was diminished when the head was held erect so as to straighten the neck. This manœuvre diminished the projection and produced greater freedom in nasal respiration.

Dr. DUNDAS GRANT. *A Case of Anterior Projection of the Cervical Vertebrae, simulating the Recurrence of Post-Nasal Adenoids.*

A young lady, aged nineteen, at the age of fourteen was the subject of an extreme degree of nasal obstruction from adenoid vegetations, producing the most extraordinary mental disturbances, which entirely disappeared thereafter. About the middle of last year she returned, vastly increased in stature, but with obvious deficiency of nasal respiration, suggesting a recurrence of adenoids. Such was found on examination, but so slight in degree as to be insufficient to produce the amount of nasal obstruction which was present. The naso-pharynx was easily cleaned by means of Quinlan's forceps, the projecting beak of which found its way into the depression above the atlas. The patient was referred to Miss Chreiman for gymnastic exercises, and to Mr. Edward Cotterill for the treatment of spinal pain, which he found to be due to traumatic coccygodynia.

*A Case of Audible Clicking Murmur accompanying Speech.*

Dr. DUNDAS GRANT showed a patient, a female aged twenty-six, who had no defect of hearing, but in whom, when talking in an animated way, there occurred a metallic clicking of a regular rhythm, certainly not simultaneous with the pulse, and which at other times disappeared entirely. It was probably due to the separation of the sticky walls of the Eustachian tubes by clonic spasms of the tensor palati muscle. Dr. Grant proposed to treat it by the use of the Eustachian bougie.

SOCIÉTÉ FRANÇAISE D'OTOLOGIE, DE LARYNGOLOGIE,  
ET DE RHINOLOGIE.

May 3rd, 1897. ("Arch. Internat. de L., O., R.," and the "Presse Médicale.")

M. A. MARTIN, *President, in the Chair.*

*The Treatment of Ozæna.*

Dr. E. J. MOURE read a complete and critical exposition of the various modes of treatment which have been or are at present in vogue, whether directed towards amelioration or actual cure of the disease. Particular attention was paid to the subject of electrolysis, which, although far from maintaining the reputation for efficiency originally claimed for it, had in his hands given thirty per cent. of cures. Subcutaneous injection of diphtheria antitoxin and of iodine solutions was also considered at some length.

M. HELME considered that the serum treatment appeared to have been judged and found wanting. The crusts were probably thrown off in consequence of hypersecretion, such as was observed when antitoxin was used for diphtheria; and this explanation of the results was the more likely inasmuch as both the ozæna reappeared on cessation of the injections, and simple artificial serum also gave favourable results.

M. LERMOYEZ believed the hopes entertained with regard to this treatment were too optimistic.

M. VACHER considered that ozæna taken early was a curable disease.

M. BONAIN had never found Loewenberg's cocco-bacillus in so-called ozæna due to adenoids.

M. LERMOYEZ, in reply to questions, stated that in his opinion true ozæna eluded all present methods of treatment; and inasmuch as ozæna was a symptom of a disease of which no other criterion (proved pathogenic bacillus, serum reaction, etc.) of its identity was forthcoming, he did not consider that cures of so-called larval forms of ozæna were admissible to the argument.

M. NOQUET had seen lasting cures from the use of chloride of zinc.

M. MOLL wished to exclude forms dependent on adenoids and sinusitis from the class ozæna.

M. LERMOYEZ was convinced of the existence of a pathogenic microbe of ozæna, and had seen two instances of the contraction of the disease by infection, and in neither of which was Loewenberg's bacillus present.

M. BONAIN had always found Loewenberg's bacillus, and had seen considerable amelioration induced by serum injections.

M. MOURET believed that the presence of various bacilli and consequent odour were due to a loss of the bactericidal properties of the nasal secretions, and that the modifications of these secretions, as well as the bone changes, were probably accountable to a trophoneurosis of as yet undetermined cause. Serumtherapy gave good results only as long as injections were continued, and were due to hypersecretion, which Delezenne had clearly proved to result from antitoxin injections. He

now suggested draughts as well as lotions of bicarbonate of soda, on account of the secretory action of that drug.

M. HELME said that M. Mouret's hypothesis had already found acceptance with clinicians.

M. MOLINIÉ had had some good results from serumtherapy, and considered M. Moure was premature in considering that the treatment had had its day.

M. MOURE, while admitting that no specific treatment of the disease was at present forthcoming, said that he had seen several cases of true cure, notably among young women. Cessation after marriage or pregnancy suggested trophoneurosis. In reply to M. Molinié he said that Gradenigo, one of the promoters of serumtherapy, had abandoned it, and that now it was clearly established that artificial serum acted as well as antitoxin.

*Molluscum Pendulum of the Tonsil.*

M. FURRET observed a small pedunculated tumour springing from the tonsil in a man exhibiting large numbers of molluscum pendulum commune on the skin of the neck and trunk. Microscopic examination revealed their identity of character.

*Transillumination by Contact of the Maxillary Sinus, or Retro-maxillary Transillumination.*

M. ESCAT. On account of irregularities in the density of the outer wall of the middle meatus, the presence of polypi, etc., and the consequent sources of error associated with indirect transillumination, the author has thought a more direct method of illumination desirable. He obtains this end by introducing a small hooded lamp into the retromaxillary fossa, between the cheek and the gum, against the latter of which the lamp is pressed.

*Pharyngeal Cough.*

M. JACQUIN drew attention to the cough due to pharyngeal lesions, and which is always associated with the sensation of foreign body.

*A Variety of Chronic Abscess of the Soft Palate.*

M. CARTAZ described two cases in which a fistulous track, opening at the junction of the anterior and posterior pillars, led to a small pocket, from which pus and caseous material could be expelled by pressure. Is the condition to be regarded as the sequel of a peritonsillar abscess, or, on the other hand, may it not be due to inflammation of a congenital diverticulum, a vestige of the second pharyngeal cleft? Possibly both hypotheses may find their application in different cases.

M. LERMOYEZ had seen a similar case where the diverticulum was accidentally discovered in a man who from time to time had a sudden access of unpleasant taste in the mouth.

*Treatment by Vocal Exercises of Certain Forms of Hoarseness.*

M. DUNDAS GRANT. One may observe by means of transillumination that during the production of head notes the transparency of the cords increases, presumably owing to expulsion of the contents of the

blood vessels. Simple congestion of the cords may therefore be diminished by careful use of the head notes. For this purpose the method of Holbrook Curtis (sounding "pm" mouth closed, "pmo" mouth open) employed with the head notes presents no difficulties, and excellent results can be obtained without interference to the professional activity of the patient.

M. CASTEX thought that where bass voices had become hoarse from use of high notes, a return to the natural limits produced cure without other treatment.

M. VACHER. As in hoarseness the high notes were specially impaired, it seemed undesirable to recommend their employment as suggested. The best way for singers to avoid hoarseness was to replace the *coup de glotte* by the Italian method of attack with progressive expiration.

M. DUNDAS GRANT said that a suitable note for the exercises must be found by experiment.

Some discussion then took place on the question of *coup de glotte* and singers' nodule.

#### *Nodular Laryngeal Tuberculosis.*

M. CASTEX described a laryngeal condition somewhat analogous to singers' nodule, but differing in many respects. The patients are usually young people subject to hoarseness and very easily troubled with vocal fatigue. A tubercular family history is often present. The laryngoscope shows on the free border or upper surface of the congested vocal cord slightly red hemispherical nodules the size of a pin's head. The speaker had observed ulceration and subsequent cure of such nodules; while in predisposed subjects he had seen transformation into tuberculous nodules.

Dr. BAR stated that the tuberculous nodules were usually surrounded by an inflammatory zone; that secondary nodules rapidly appeared in a single line along the free border of the cord; that infiltration supervened; and that ulceration, which was superficial and curable by lactic acid, followed.

M. CASTEX. Histological examination had not been made.

#### *A Comparison of the Hydrochlorates of Eucaïne and of Cocaine.*

M. MARTIN states that, unlike that of cocaine, the solution of hydrochlorate of eucaïne can be sterilized by boiling without decomposition. The mucous membrane does not contract under eucaïne, and the use of the snare is therefore facilitated.

Cold sweats, tendency to faintness and excitement, have not been observed by the author when employing eucaïne.

M. CARTAZ was not satisfied with eucaïne, and found it disagreeable to the patients.

M. MOURE considered the retraction caused by cocaine an advantage, in clearing the view and temporarily checking hæmorrhage.

M. LERMOYEZ took an opposite view with regard to the temporary cocaine anæmia.

M. MOURE found cocaine advantageous in distinguishing between hypertrophied and merely congested tissues.

May 4th.—M. MARTIN in the Chair.

LERMOYEZ. *The Causes of Recurrent Paralysis.*

This is an academic thesis dealing with the pathology and pathogeny of recurrent paralysis, and contains, we believe, nothing new in the way of observation or theory. The matter is, however, so completely and so clearly presented that the paper should be read by all specialists and general physicians who are not fully acquainted with the subject. The object of the thesis is to emphasize the fact that recurrent paralysis is not necessarily a symptom of great gravity, and the author proposes a clinical classification as follows:—

1. The classical form indicative of mortal disease.

2. Incurable benign cases, involving a permanent laryngeal infirmity compatible with prolonged life.

3. Curable benign cases, which may leave no trace on recovery, and which appear to indicate a primitive neuritis, sometimes the result merely of chill.

M. LUC sincerely congratulated the author on his work, which definitely decided that hemiplegia of the larynx did not occur in cerebral hemiplegia.

M. CARTAZ and M. TEXIER had never seen laryngeal paralysis in cases of hemiplegia.

M. MOURE concurred in this statement. M. Lermoyez did not admit the possibility of incomplete recurrent paralysis limited to the constrictor muscles. M. Moure had, however, observed palsy of the cord in extreme abduction due to severance of the recurrent at the level of the cricothyroid membrane.

M. CARTAZ spoke of alteration of voice, etc., due to injury to the nerve, short of section, during operations on the neck, or to involvement in cicatrices.

M. VACHER spoke of a case of hysterical palsy which lasted nine years, and yielded to hypnotic suggestion.

M. LERMOYEZ was of opinion that a case such as M. Moure's, with paralysis limited to the adductors, was not an impossibility, nor did it weaken the position of Semon's law. Risier Russell had shown that the recurrent consisted of two parts—one resistant, supplying the constrictors, the other fragile, supplying the abductors. It was quite possible that certain subjects presented an inversion of this type. In reply to M. Vacher, he stated that hysteria paralyzed a function, and not a set of muscles or particular nervous structures.

M. MOURE had seen recurrent paralysis due to rheumatism and cured by salicylates.

*New Facts relative to the Ogston-Luc Method of Radical Cure of Frontal Sinus Empyema. Critical Examination of Failures and Accidents due to Defective Execution.*

M. LUC. The paper, to be published *in extenso* later, lays especial stress on the curettage and disinfection of the focus, and the case reports show that relapses and intracranial complications invariably result from

incomplete curettage. A successful case is reported of cure by curettage of a man of forty-five, in whom all the sinuses were involved. In another instance a frontal sinus required four operations before cure was arrived at.

*New Operative Method for the Radical and Rapid Cure of Chronic Empyema of the Maxillary Sinus.*

M. LUC described his new method, which aims at obtaining a good, well-lighted view of the antrum, without subsequently subjecting the latter to the chances of infection from the mouth. It consists in removal of a considerable part of the anterior wall of the sinus, after laying back the gum; minute inspection and curettement of diseased points, followed by cauterization with a strong solution of zinc chloride.

With the gouge and mallet a communication is made into the anterior end of the inferior meatus, and a drain tube is inserted for the escape of discharges into the nose. The cavity is dusted with iodoform, and the buccal wound is closed by replacement of the gum. The cavity, which now communicates solely with the nose, is cleansed with injections of ethereal solution of iodoform, and later with formol or boric irrigations. At the end of fifteen to twenty days the drain tube may be removed through the nose and the cure is complete.

Three successful cases were reported and two of the cases shown.

M. LERMOYEZ, in speaking of the good results obtained by Luc's method for the frontal sinus, suggested the employment of deep and superficial suturing to avoid deformity. He, moreover, thought post-operation douching undesirable, as likely to disturb cicatrization. The nose should be blown very gently, to prevent ballooning of the scar by the introduction of air which found no ready exit. The method deserved the highest praise.

M. MOURE had also seen ballooning of the scar a few days after operation. The fatal cases reported by Luc could be laid to the charge of neither operator nor method, which was excellent in every way. He wished to know if median incision in bilateral cases could not be avoided.

M. HELME asked how hæmorrhage was stopped in the antrum operation; if the canula-tube of Doyen would not be useful to prevent inhalation of pus during operation; and how obstruction of the nasal duct was avoided.

M. DUNDAS GRANT spoke of Krause's method and the good results obtained with perforation of the anterior wall. He also asked if removal of the inferior turbinate was not advantageous.

M. LUC. In reply to M. Lermoyez's flattering remarks on the frontal sinus operation, he agreed that post-operative douching was unnecessary, and that he now merely injected ether and iodoform. For the maxillary sinus douching was very necessary. In reply to M. Moure, he said that he believed more and more that bilaterality was inevitable, and therefore he employed, even in doubtful cases, the median incision.

In reply to M. Helme, he controlled hæmorrhage with gauze plugging. The nasal duct could easily be avoided. To M. Dundas Grant he replied that he did not find removal of the inferior turbinate desirable.

*Surgical Treatment in Dry Otitis Media.*

M. MOUNIER suggests operation in certain cases of severe sclerosis, where after paracentesis Rinné changes from negative to positive. The preliminary paracentesis is best made with deliquescent chromic acid.

The operation has for aim the mobilization of the stapes, and consists in removal of the membrane, malleus, and incus, and that portion of the postero-superior wall of the meatus which hides the stapes. The protector gouge, described elsewhere in the JOURNAL OF LARYNGOLOGY, is employed. By this means all can be performed through the intact meatus. Antiseptics are necessary to prevent untoward cicatrization.

M. MIOT asked if he did not find the stapes interfered with by the cicatrix, as he had experienced.

M. MOUNIER had indeed found a tendency to the formation of a vertical band fixed to the stapes. This should be destroyed with chromic acid.

M. GELLÉ had presented an instrument similar to the protector gouge, but of more solid make. He pointed out the danger to the facial by impaction of particles of bone.

M. MOUNIER explained that this danger was non-existent if, as directed, the protector was pulled towards the operator at the moment of the mallet's impact, and so brought away the morsel with it.

*Syphilitic Stricture of the Upper End of the Œsophagus treated by Jaboulay's Sound.*

M. LANNOIS (Lyon). The case of an annular cicatricial stricture barely admitting No. 3 olivary bougie. The condition was rapidly and painlessly relieved by Jaboulay's sound, an instrument provided with an india-rubber sheath, which is carefully inflated after introduction.

*Contribution to Aural Surgery. Considerations upon Osteoperiosteal Mastoiditis following Otitis Media.*

M. A. BONAIN (Brest). The author draws attention to the frequent occurrence of disease of the internal wall of the mastoid, and to the surgical importance of lesions in this situation on account both of the thinness of the bone and the important structures in the immediate neighbourhood. He considers that the internal wall should be explored wherever the lesions discovered do not fully explain all the symptoms. The operation is not thereby increased in gravity, while failure is avoided.

*Contribution to the Study of Laryngeal Ictus.*

M. MOLL related the case of a man subject to violent fits of coughing, followed by vertigo and loss of consciousness. Such fits seemed to be dependent on a nasal reflex neurosis, and appeared to be provoked by mental agitation or laughter. After removal of a septal spur the fits ceased. The ordinary matutinal cough, due to mouth breathing, never gave rise to ictus.

In a second case similar phenomena were provoked by laughter and coryza. The daughter of this patient was subject to epileptiform seizures with loss of consciousness, which were much relieved after removal of adenoids and nasal treatment.

*Incomplete Recurrent Paralysis.*

MM. TEXIER et C. MIRALLIÉ (Nantes). The case of a workman of fifty-eight, who had an apoplectic stroke on December 14, 1896, with four hours' unconsciousness ; some difficulty of speech during the following days ; retention of urine and fæces ; no palsy of the limbs. Three months later (March 11, 1897) the right vocal cord was found immovable in the median position, and the facial muscles on the right side were paretic. Taste was diminished, and sensibility was impaired about the left half of the forehead. Reflexes normal. No paralysis of limbs, and no kind of aphasia. Intoxication, alcoholism, and syphilis were excluded.

On May 1st, 1897, the right vocal cord had passed towards the cadaveric position ; facial paresis more marked. The authors discussed the diagnosis between bulbar and cortical lesion, inclining towards the latter explanation.

*May 5th.*—M. MARTIN and M. LANNOIS in the Chair.

*Affections of the Larynx, Nose, and Ears in Relation with Public Medicine.*

M. CASTEX introduced this discussion with a lengthy paper dealing in detail with the medico-legal aspects of the speciality when concerned with accidents, explosions, hanging, infanticide, civic and trade responsibility, syphilitic infection, and so forth.

M. HELME spoke of infection with the Eustachian catheter as an accident of the past, and drew attention to the opportunities afforded of taking legal action against charlatans.

M. GELLÉ thought no gain would accrue to a general appeal to law. He drew attention to aural symptoms which followed injuries after a period of immunity.

M. MOURE considered that the absence of gelatinous contents from the middle ear in the newly born did not constitute evidence of separate existence.

M. MOURE had also seen ecchymosis and hæmatoma in the larynx of those hanged, and thought that laryngoscopy afforded important evidence in cases of possible *post-mortem* hanging.

M. GELLÉ thought it easy to err on the side of accusing catheterization of causing syphilitic infection.

M. HERCK had examined five cases of hanging, and had not seen ecchymosis or congestion of the tympanic membrane.

M. LANNOIS referred to difficult problems arising out of deafness alleged to be due to trade or accident, where a previous lesion or concomitant disease might be present. He also drew attention to the difficulties in regarding illiterate deaf mutes as responsible citizens.

M. CASTEX did not find persistent tinnitus following accidents, unless chronic ear disease was previously present.

*The Results of Permanent Artificial Perforation of the Membrana Tympani.*

M. MIOT commended the method in cases of dry middle ear disease. In answer to M. Helme he stated that he did not operate when hearing was absent or when the stapes was fixed.

*Treatment of Deviations of the Septum Nasi.*

M. SARREMONE recommended the removal of obstructive portions of the septum with the knife or saw, rather than an attempt at reposition.

M. NOQUET recommended removal with the gouge. The inflammation following electrolysis sometimes lasted two or three weeks.

M. MARTIN had found difficulty in limiting the action of electrolysis and had seen perforation follow its use.

A letter was read from M. GAREL, in which he stated that he found the new treatment of ozæna by cupric electrolysis to give results, but not equal to those claimed in some quarters. With regard to the occurrence of laryngeal palsy in total hemiplegia, he had examined all cases systematically, but had never found the condition present.

*On Three Cases of Intracranial Complication of Otitis.*

M. MOURE related the case of a child who, during the course of an acute otitis, exhibited a slight swelling over the mastoid, with fever. On operation, fungosity of the dura and limited subdural suppuration was discovered. In a second case a puerperal woman with otorrhœa gave signs of mental alienation. A subdural abscess was opened, and *post mortem* an abscess the size of a hen's egg was found occupying the temporo-sphenoidal lobe. In the third case a child, who appeared to be cured of an acute otitis media, did not lose the febrile symptoms, and experienced rigors. Paracentesis was performed and pus removed. On further operation the lateral sinus was found full of pus. Stress was laid on the absence of diagnostic and pressing symptoms in the three cases.

M. RIVIÈRE found cerebral abscess generally associated with long-standing tubercular suppuration. The prognosis he considered fatal. Suppurative phlebitis of the sinus allowed of a better prognosis.

M. LERMOYEZ had made a systematic inquiry into these cerebral complications, which were regarded by the profession at large as but rarely otitic in origin. He concluded that though aural symptoms were sometimes but little marked, yet the error usually arose from failure to make any examination of the ears. This was particularly the case where old sclerosed ears were concerned, and where pus penetrated the membrane with difficulty.

M. BONAIN had seen a case of death from cerebral abscess where no diagnostic symptom was present.

M. LERMOYEZ regretted the absence of routine aural and fundus oculi examination in general practice. He considered the two most important signs of sinus phlebitis to be marked oscillation of temperature and development of collateral circulation.

M. MOURE, in agreeing as to the very grave prognosis in cerebral abscess, pointed to cases of cure reported by Barr and others. An important diagnostic symptom was sharp pain in the parietal fossa.

M. LERMOYEZ remarked on the uncertainty of temperature in cerebral abscess.

M. GELLÉ considered that the symptoms of cerebral abscess were so obscure that mistakes were excusable.

M. LERMOYEZ agreed to this statement, and mentioned a case which died of cerebral abscess after exhibition in the class room as a typical instance of post-typhoid mania.

*Two Cases of Paralysis of the Left Vocal Cord of Alcoholic Origin.*

M. DUNDAS GRANT. One case was that of a clergyman who had suffered with weakness of voice for fifteen days, in whom one vocal cord remained in the cadaveric position. At the same time neuritis of the sciatic nerve was present. Abstinence from an excessive alcoholic habit, together with doses of nux vomica, was followed in four weeks by return to health.

*Contribution to the Study of Aural Affections in Gout.*

M. GEORGES GELLÉ (*fils*). Hereditary gout attacks the ears in early life, and in gouty subjects otorrhœa following the exanthemata is very intractable. General hygiene is an important element in the treatment. In acute gouty otitis the membrana flaccida is injected, together with the walls of the attic, to which and to the ossicles the inflammation seems to be limited.

Chalky deposits are seen also in the membrane, and the thickened handle of the malleus appears to terminate in a broad spatula. The acute onset is preceded by a pharyngitis, the œdema arising from which gives rise to the appearance described as "false pillars." Suppuration may follow or the inflammation may subside on the establishment of an ordinary attack of gout.

Deafness, vertigo, and tinnitus may herald an attack of gout or an allied manifestation (*e.g.*, hepatic colic), ceasing as these develop. "Gouty vertigo" is, according to the author's experience, found only in old cases of ear disease, and should be described as *ab aure læsa*.

In answer to M. Helme and M. Lermoyez, the author stated that he used sulphate of quinine and sodium salicylate in these cases, and with very good results with the latter drug.

M. GELLÉ (*père*) had seen an excellent result with salicylates in a case of tinnitus due to rheumatism.

*A Case of Papillary Tumours of the Inferior Turbinate and Septum.*

M. NOQUET described a case in which ten of these growths were removed from a man of forty. Microscopically they appeared to be due to hypertrophy of the connective tissue, and were not true papillomata.

*Chemical Analysis of Cerumen.*

MM. LANNOIS et MARTZ (Lyon). The results of this investigation are reported elsewhere in this journal.

*Contribution to the Study of Vascular Tumours of the Nasal Septum.*

M. EGGER had removed a pedunculated tumour the size of a cherry from a woman of seventy-one subject to epistaxis. Microscopically this

presented all the appearances of an organized clot, from the new-formed vessels of which subsequent hæmorrhages had occurred, the resulting clot organizing and giving rise to a repetition of hæmorrhage. It was implanted in the area of the terminal branches of the sphenopalatine artery, a spot subject to congestion, and submucous hæmorrhage here seemed to have started the development of this "hæmorrhagic polyp." Eight months after simple removal no recurrence had taken place.

*Troubles due to Adenoid Vegetations in the Adult and Adolescent.*

M. A. BONAIN related certain cases where symptoms had been relieved by operation, and he pleaded for routine examination of the nasopharynx in adults in whom obvious symptoms were usually wanting.

May 6th.—M. MARTIN in the Chair.

*Acute Inflammation of the Lingual Tonsil.*

M. BAR (Nice). The "lingual tonsils" are the result of inflammatory enlargement of follicles at the base of the tongue, and the inflammation may be due to simple catarrh *à frigore* or to primary or secondary infection (typhoid, etc.). Influenza seems particularly apt to cause such enlargement. In all cases the streptococcus pyogenes is concerned in the process.

The guttural obsession produced by these hypertrophies in the climacteric, etc., are well known, and permanent enlargement and vesicular varicosities should be treated by galvano-cautery; while the primary stage of acute inflammation indicates the use of salol with detergent local applications.

*Monaural and Binaural Perception of the Direction of Sound.*

M. ANGIÉRAS (Laval). With one ear closed the subject is able to perceive the direction by a similar appreciation of the muscular sense as that concerned in visual perception. The sound is heard loudest when in the axis of the meatus, and the muscular effort involved in turning the head to gain this maximum affords the necessary data.

With both ears open the maximum result is obtained by bringing the sonorous object into the median position in front, and muscular sense again affords the basis of mental orientation.

When, however, the sound is instantaneous and its intensity unknown, the muscular mechanism does not come into play, and only a vague indication is present as to whether the sonorous point is in the right or left auditory field, and the psychical perception of the exact angle of divergence from the middle line is wanting.

Again, when one ear is closed and the sonorous intensity is unknown, memory is unable to afford a basis of comparison, and the direction of an instantaneous sound remains unperceived. Where the use of one ear is rapidly lost the patient retains for a time the habitual binaural method of appreciation of direction, and consequently errs in his auditory judgment. The faculty of monaural orientation does, however, still exist, as

may be shown by moving a continuous sonorous body through the auditory field of the uninjured ear when the patient is blindfolded. This function of the single ear should be explained to intelligent patients suffering with "paracusis loci," and by practice can be made to afford an effectual guide to orientation.

*Papillomata of the Soft Palate.*

M. GOOD (Enghein). The author considers that true papillomata are very rare in this region, an adenomatous element usually being present. These two cases were, however, pure papillomata, consisting of looped vessels within an epithelial covering.

*On Pharyngeal Cough.*

M. P. JACQUIN (Rheims). The characteristic pharyngeal cough, associated with the sense of foreign body, is, in the author's opinion, never produced by simple hypertrophy of the four tonsils, and a minute search is often required.

*Ozæna and its Treatment by Alkaline Medication.*

M. MOURET (Montpellier) believes that the passing benefit which results from the divers forms of treatment now employed is due to excitation of glandular secretion. On this hypothesis he gives alkalines, and particularly bicarbonate of soda, internally as well as locally, and with good results.

*Unilateral Laryngoplegia due to Traumatism of the Spinal Accessory.*

M. MOLINIÉ. A case of paralysis of the left cord, left side of palate, and constrictor of the pharynx, due to wounding the spinal accessory in attempted suicide.

*Bacteriological Researches in Ozæna.*

MM. AUCHÉ and BRINDEL. The following results were obtained from examination of twenty-four cases. (1) Loewenberg's diplo-bacillus was present in all cases of atrophic coryza, with or without ozæna in course of evolution. It was never found in old atrophic coryzas apparently cured. (2) The pseudo-diphtheritic bacillus was present in eighteen out of twenty cases of atrophic coryza in evolution. It was absent in two cases of atrophic coryza with ozæna. It was present in two out of four cases of old atrophic coryza much ameliorated. (3) The small bacillus of Pes and Gradenigo was only present in the ozænous, and then in the proportion of three in twenty. (4) Electrolysis made no difference in the flora present.

*Mastoid Periostitis.*

M. LAURENS. Uncomplicated cases are very rare, and the author relates an example following acute coryza. Retroauricular swelling was present and the auricle displaced, though the meatus was free. Redness of the membrana tympani and diminution of hearing was present. Lymphangitis and adeno-phlegmon could be excluded. Pus was let out by incision and the mastoid was trephined, but both cells and antrum were found quite free from pus.

M. RIVIÈRE had seen a similar case and believed diagnosis impossible.

M. LERMOYEZ had seen the patient and agreed that the case was not adeno-phlegmon. In spite of such cases Wilde's incision was condemned.

M. MOURE agreed that the mastoid should be opened where retro-auricular pus was present.

M. BONAIN thought that an almost normal state of the antrum and cells was not so very rare in cases of suppurative periostitis. One should remember, however, that the bone itself had been inflamed, the osteitis subsiding while the periostitis went on to suppuration. Such suppuration, moreover, was not confined necessarily to the external face, but might constitute subdural abscess, sinus phlebitis, etc.

M. LAURENS agreed that in these cases the mastoid should always be opened.

*Contribution to the Study of the Intracranial Complications arising in the course of Suppurations of Parts near the Cranium (Middle Ear Frontal Sinus).*

M. LUC related the details of two cases of cerebral abscess consecutive to frontal sinus disease, and one of sphenoidal lobe abscess due to median otitis.

The earlier history of one of the frontal cases has been dealt with already in these pages. The author was and is of the opinion that the abscess arose from puncture exploration through an infected pia mater not efficiently sterilized. On the 30th April (*i.e.*, after four months) a large fistulous abscess 13 centimètres in depth still persisted. The author drew special attention to the latency of cerebral abscess. In one case an abscess (containing 20 c.c.) in the sphenoidal lobe gave rise to no physical or intellectual disturbance. On the other hand, a small area of subdural suppuration often gave rise to the most alarming symptoms, which were relieved by simple cleansing of the dura.

The diagnosis between subdural abscess, meningitis, and cerebral abscess remained still a great difficulty, and the author was of opinion that exploration should be made by stages, attacking the dura, the pia, and the brain in rotation. If during one of the first two explorations pus was discovered, a respite of twenty-four hours should be given, and proceedings resumed only if grave symptoms persisted.

Puncture of the brain through the intact dura was inadmissible. The details of operation and of subsequent drainage were carefully gone into by the author.

M. LERMOYEZ. M. Luc's principle of action entailed a danger of sudden death by leaving the patient, possibly for some hours, with a cerebral abscess. The speaker therefore suggested immediate puncture with the galvano-cautery, which gave an aseptic eschar.

M. RIVIÈRE thought that suspicion of intracranial mischief entailed exploration. He thought the maintenance of efficient drainage would be facilitated by the use of the galvano-cautery.

M. LUC, in reply to M. Lermoyez, thought the delay of twenty-four or forty-eight hours, after finding, say, a subdural abscess, was safe and desirable, and the rule would have saved infection in the case related above.

M. MOURE agreed that the short delay was quite safe.

Dr. DUNDAS GRANT, after congratulations to M. Luc on his work, asked if the subnormal temperature, which in England was regarded as an important symptom of cerebral abscess, was so estimated by French surgeons; also, if he had made use of decalcified bone drains.

M. LUC had seen apyrexia frequently, but not subnormal temperature. M. Ballance had advised him to use a metal rather than a bone drain, which became too soft.

*An Olfactometer charged with a Chemically Pure Odoriferous Solution.* Dr. ZWAARDEMAKER.

M. MOLL. By the use of accurate solutions of pure chemicals the minimum perceptible by the normal nose was determined, and olfactory defects calculated therefrom. By the use of two porous tubes and two odorous bodies, interference phenomena were obtained.

*Various Lesions of the Ear, Nose, and Pharynx, found among Children in the Deaf-Mute Institutions. The Importance of Treatment.*

M. HAMON DU FOUGERAY described the result of a year's work among forty-five deaf-mute children. (1) Proceedings taken in view of impaired respiration—six operations, six cures. (2) For articulation—six cases—two speech perfect, four speech improved. (3) Hearing—fourteen cases, thirteen improved.

*Treatment of Laryngitis by Intralaryngeal Pulverizations.*

M. VACHER (Orleans). Exhibition of an instrument to be used by the patient.

*Ultimate Results of Sinusitis Frontalis.*

M. RIVIÈRE. A case in which the slow method of drainage was employed on account of the previous long duration of the disease.

*Treatment of the Mastoid Complications of Acute or Chronic Purulent Median Otitis by Washing Out the Tympanum through the Eustachian Tube.*

M. GROSSARD. It is not necessary to operate when a subject of acute otitis is threatened with mastoiditis. The process may be arrested or limited by lavage through the catheter with boiled water or one per cent. phenosalol. The membrane must, of course, be widely perforated.

*Epistaxis due to Odours.*

M. JOAL related three cases in which perfumes produced epistaxis, and explained the phenomenon as due to a reflex engorgement of the erectile tissues which exceeded the resistant powers of the vessel walls.

*Ernest Waggett.*

AMERICAN OTOLOGICAL SOCIETY.

May 4th, 1897.

(Abstracted from "Med. Record," May 22nd, 1897.)

*Goutiness in its Relation to Diseases of the Ear.* Dr. A. H. BUCK.

The literature of the subject was thoroughly dealt with, the one omission being S. Mackenzie's paper on subjective noises, and the author acquiesces with Garrod and others in considering eczema of the ear in adults as most frequently of gouty origin. Typical cases are given. The third case—one of a granulating tympanic membrane—is considered by the writer to have had a gouty origin. In the fourth case a chalky mass was found occluding one meatus; the explanation offered is that this was really a mass of urates which had ruptured its envelope of skin, and so become a foreign body in the canal. The fifth case was an obstinate eczema, which was complicated, first with furuncles, and lastly developed into a veritable mastoiditis. The sixth case was a case of median otitis in an arthritic patient, and the last also one of eczema. The cases mostly were benefited by constitutional treatment.

The discussion was opened by Dr. J. O. TANSLEY (New York). He did not consider eczema in children of gouty origin, but recognized as due to a gouty tendency a bright red spot in the upper part of the membrane, which was not due to the congestion of the mucosa, but to that of the articulation of the ossicles.

Dr. DENCH (New York) had seen one case of true hyperostosis of the canal due to eczema. He had obtained good results from local application of *cantharidis acetani*.

*The Differential Diagnosis between Diseases of the Sound-Conducting and Sound-Perceiving Apparatus.* Dr. E. B. DENCH (New York).

Obstruction to or interference with the conductive apparatus always gave rise to the same signs—quantitative audition it might be called. Quantitative audition was estimated by musical tones. In difficulty with the conductive apparatus the lower tones of the scale were first lost. In perceptive difficulty the lower tones were not lost. In conductive difficulty high notes were good; in perceptive difficulty they were not. In mixed cases, in which impairment was extreme, air conduction was better than by bone, except for the very lowest notes.

Dr. THEOBALD (Baltimore) had experienced much perplexity from the varying results at the vertex and on the mastoid.

Dr. ALDERTON (Brooklyn) had noticed the same trouble, and was best pleased with the central incisors as a point to test from.

Dr. C. J. BLAKE (Boston) attributed the differences in different parts of the vertex to the varying thickness of the skull.

*Ear Complications of Influenza.*

Dr. W. P. EAGLETON (Newark, New Jersey) read a short paper on this subject, giving statistics of the proportion of cases of ear disease to

those of influenza, and pointing out the differences in tractability between those following influenza and those of other origin.

### *Mastoid Disease.*

Dr. BACON reported twenty-seven cases of mastoid disease. He gave the following points as indications for operation: high temperature, tenderness, bulging of Shrapnel's membrane. When mastoid symptoms developed in chronic cases, there should be no delay. In acute cases he advocated leeches, followed by Leiter coil and free incision of the membrane; if the symptoms persisted he would open the mastoid at once.

Dr. W. R. JOHNSON (Paterson, New Jersey) did not approve of Politzerization after incision of the drum.

Dr. DENCH. Infection of the raw surface might prevent the temperature falling after operation. He had never seen harm result from Politzerization after incision.

Dr. TANSLEY uses salt solution for irrigation.

Dr. BUCK referred to cases where pneumonia and endocarditis coexisted with mastoiditis and kept up the temperature.

Dr. BACON, in reply, said he only Politzerized when a free opening was present.

### *Thrombosis of Lateral Sinus with Mastoid Abscess.*

Dr. ALDERTON (Brooklyn, New York) read notes of a case and showed the specimen. When the wall of the sinus was opened, horrible pus welled up. The case was left for twenty-four hours, then the sinus was slit up and curetted; there was temporary improvement, but the patient sank twenty-four hours later from metastatic pneumonia. *Post mortem* the antrum and attic were full of cheesy pus, but the tympanic membrane was not congested. He wished to emphasize the importance of gaining free access to these cavities, and also the value of ligation of the jugular to shut off extension of the sepsis.

Drs. DENCH and BACON would not always ligature the jugular.

Dr. ALDERTON said he would if there was much disease of the sinus wall.

### *Pilocarpin in Deafness.*

Dr. BACON read a paper on the permanent benefit derived from this drug in a case of extreme deafness. Removal of the ossicles further improved this case. The best results were obtained in syphilitic cases, and sufficient length of time should be allowed in the trial.

Dr. TANSLEY considered administration of the drug by the mouth as sufficient.

### *Deviated Septum.*

Dr. TANSLEY described a new operation. (Details not given.)

### *Simulation of Labyrinthine Disease.*

Dr. ROBERT C. MYLES (New York) read a paper on the synechial bands of the Eustachian tube and fossa of Rosenmüller, producing symptoms simulating labyrinthine disease, relieved by breaking up the adhesions with the finger, with immediate relief of the symptoms.

*New Aural Speculum.*

Dr. J. E. H. NICHOLS exhibited this instrument, which left both hands free. *Lake.*

VEREIN FREIBURGER AERZTE.

*Meeting of 29th January, 1897.*

(From the "Münch. Med. Woch.," 25th May, 1897.)

Herr KLEIN read a paper on *Tracheotomy and Intubation in Diphtheritic Stenosis of the Air Passages.*

Commencing with a short history of the origin and development of intubation, he next demonstrated O'Dwyer's instrumentarium and method of using same. From his own observations during six months in the Kaiser and Kaiserin Friedrich Kinderkrankenhaus, as well as from the results obtained through the whole hospital, it was evident that since the introduction of serumtherapy the number of intubations had materially increased, and the results had been very satisfactory. Next he dealt minutely with the indications for tracheotomy and intubation, and discussed the advantages and disadvantages of the latter. Intubation, he maintained, ought to be employed in private practice.

DISCUSSION.

Herr VON SCHAMISSE had tried intubation in the surgical clinic, but had given it up on account of the great technical difficulties and the unsatisfactory results obtained. He drew special attention to the delicacy of a child's larynx, the swollen condition of the pharynx, etc., in diphtheria, the danger of the tube getting blocked, the great strain put on the attendants, the necessity of always having at hand a doctor capable of intubating in case the tube either fell out or was pulled out by the child, the terror of the child each time intubation had to be repeated, and the difficulty of feeding. In his three cases ulcers formed, which ultimately necessitated tracheotomy.

Herr KILLIAN spoke strongly against intubation being employed in private practice.

Herr E. BLOCK. *Operative Treatment of Otitis Media Suppurativa.*

Operation must be resorted to (1) when conservative methods have failed to produce healing; (2) when the suppuration has become the source of dangerous complications. The latter condition generally arises in connection with acute cases. Chronic cases lasting for years always depend on disease of the bone, caries, formation of sequestra, or cholesteatoma, or combinations of these. Cholesteatoma, the most deadly of all ear diseases, should always be an indication for radical operative treatment, except where there is a wide opening through the posterior wall of the meatus.

The principal complications of middle-ear suppurations are phlebitis of sinus, etc., with pyæmia, fatal hæmorrhages from the carotid, pachy-

and lepto-meningitis and cerebral abscess, temporary or permanent facial paralysis, etc., etc.

The operation most frequently required is the opening of the mastoid. In acute cases, each must be treated on its own merits. For chronic cases typical methods of operating have been devised. The speaker had for the last three years regularly closed the wound behind the auricle, all except the lower angle, at once. This primary closure of the wound he had adopted even in dealing with large cholesteatomata, and had obtained perfectly satisfactory results. The object of the operation is to unite into one large cavity the meatus, tympanum, attic, antrum, mastoid cells, and external mastoid wound. The cavity thus formed gets covered over with epidermis instead of mucous membrane, and can retain neither pus nor cholesteatoma. Of fifty-one chronic cases operated on by the speaker during the last sixteen months, thirty were cases of caries or sequestrum formation, twenty-one of cholesteatoma. *Arthur J. Hutchison (Trans.).*

## ANNOTATION.

### SHORT NOTES OF CASES.

WE would direct the attention of our subscribers and contributors to the value possessed by short notes of cases, as exemplified in this month's issue. It is often very difficult to bring notes of cases forward at societies' meetings—either one is busy, or prevented, maybe, by some other reason, such as the difficulty of presenting the patient. And it is a great pity that valuable material should be lost in private archives, and not put on record, even though they be presented in a bald and somewhat unvarnished state. Especially useful are series of cases reduced almost to a tabular form, as they are available for easy reference. These short notes have also the advantage to the writer that he is enabled to dispose of the laborious task of looking up references, one which must be one of the causes of the want of reports on interesting cases.

## ABSTRACTS.

### DIPHTHERIA, &c.

**Blumenthal, F.**—*On the Possibility of Forming Diphtheria Toxins from Albumens and from Nutrient Media containing Sugar.* "Deutsche Med. Woch.," June 10, 1897.

AFTER referring to previous observations and experiments on the formation of toxins in albumens and the inhibitory action of carbo-hydrates on this process, the author proceeds to describe some of his later researches on diphtheria-toxin formation.

One set of experiments with weak alkaline solutions of egg and serum albumen proved that, though in many cases the bacteria grew very richly, they produced no toxins. As it was possible that, although the bacteria did not use albumen in forming toxins, they might be able to make use of albuminoid bodies, a second series of experiments was undertaken. Nutrient media of Witte's peptone, of casein, of antipeptone, and of nuclein, were tried, but always with negative results. Control experiments with peptone-bouillon always gave positive results. The decomposition of this medium took generally about seven days.

Observations on the formation of toxins in milk (*e.g.*, Feinberg's experiments on cholera toxins) seemed to show that the formation of lactic acid out of sugar of milk had an inhibitory action on the formation of toxins. The author, therefore, next proceeded to investigate the influence of pure sugar on the formation of diphtheria toxin by growing virulent cultures of bacillus diphtheriæ in pure solutions of sugar. The growth of the bacillus in from one per cent. to two per cent. solutions of grape and of milk sugar was extraordinary, but no toxins were produced. Thus the sugar seemed in some way to be able to turn all the energies of the bacillus to simple increase, leaving none for the formation of toxins. To test this further another series of experiments was carried out. Three vessels, containing seventy-five cubic centimètres each of alkaline peptone-bouillon, were taken. To No. I. were added fifty cubic centimètres of a five per cent. grape sugar solution; to No. II. fifty cubic centimètres of a five per cent. milk sugar solution; and to No. III. fifty cubic centimètres of water. These were then inoculated with bacillus diphtheriæ, and after five days were sterilized, treated with chloroform and cold, then filtered. The filtrates were then injected into guinea-pigs. Three guinea-pigs were injected with 0.5 cubic centimètres of the filtrates. Those injected with Nos. I. and II. remained quite healthy. That injected with No. III. died in seventeen hours. *Post-mortem* typical. Again, one guinea-pig was injected with two cubic centimètres of No. I.; one guinea-pig with two cubic centimètres of No. II.; one guinea-pig with 0.2 cubic centimètres of No. III. The first two remained healthy; the third died in two days. *Post-mortem* typical.

Again, guinea-pig (*a*) injected with three cubic centimètres of No. I.; guinea-pig (*b*) injected with three cubic centimètres of No. II.; guinea-pig (*c*) injected with 0.1 cubic centimètres of No. III. (*a*) and (*b*) remained healthy; (*c*) died in three and a half days. *Post-mortem* typical.

The amount of sugar required to inhibit the toxin formation was then investigated. "When the peptone-bouillon contained one per cent. or more of sugar no formation of toxin could be noted within five days—*i.e.*, up to four cubic centimètres injected into the peritoneum of guinea-pigs remained without effect; whereas 0.1 cubic centimètre of the sugar-free sterile peptone-bouillon always killed a guinea-pig of 250 gr. in three to six days in the typical manner."

The growth of the bacillus was in no way hindered by the addition of sugar—rather seemed increased—and there was always a formation of acid in the bouillon and sugar solutions, which never took place in the pure peptone-bouillon.

It is, therefore, possible by adding sugar (a carbo-hydrate) to peptone-bouillon to prevent the formation of diphtheria toxin without hindering the growth of the bacillus.

Arthur J. Hutchison.

**Damieno, A.**—*One Hundred Cases of Diphtheria treated with Antitoxic Serum.*

"Arch. Ital. di Otol., Rinol., e Laringol.," Avril, 1897.

THESE one hundred cases, selected amongst one hundred and eighteen observed by Massei and Damieno in about two years in private, may be thus divided: fifty of croup and fifty of pharyngeal diphtheria. The mortality has been ten for one hundred in these latter; of twenty-eight for one hundred in the first. Amongst

the fifty cases of croup intubation was necessary in twenty-six. Once only tracheotomy was done after intubation, which did not relieve dyspnoea. Amongst these (twenty-seven cases) eighteen recoveries and nine deaths.

The observations made by the author show evidently not only the wonderful power of antitoxin, but also that failures were due to a late administration of the remedy, or to denied permission to perform intubation in cases where the first indication was the duty of improving breathing.

Bacteriological examinations put out of doubt the exactitude of the diagnosis, and a comparison with the results of a long practice anterior to the serum discovery and intubation, demonstrate that really at present we cannot hope for better results in the treatment of diphtheria, if we arrive in time. *Massei.*

**Levi, A.**—*A Case of Hemiplegia Cerebralis following Diphtheria.* "Archiv für Kinderheilk.," Band XXII., Heft I and II.

A FULL account is first given of the case; then the question of the nature of hemiplegia following diphtheria is considered.

Anna Sebag, six years old, suffered from a severe attack of what Monti calls "gangrenous diphtheria," during which she developed an endocarditis acuta, otitis suppurativa, abscess in neck, paralysis of palate, pupil, etc. Towards mid-day, 17th March, sudden apoplectic seizure, with consecutive left-sided paresis of face, upper and lower limbs. After a few hours the paresis gradually disappeared, leaving only a slight weakness of the parts involved. 19th March: second apoplectic seizure, more violent than the first—the same parts paralyzed as last time, but the paralysis was more marked and did not pass off. In the next few days the facial paralysis gradually diminished, but that of the limbs remained unchanged. 28th March: acute increase of the paralysis, involving the muscles of trunk and neck. At this time the patient had two independent groups of paralysis. On the one hand was paralysis of pupil, palate, trunk, and neck; on the other, the paralysis of the face and limbs. Sensation and reflexes specially weak on the affected side. Gradually the paralysis of the trunk, then that of limbs, passed off, leaving only a slight degree of weakness and stiffness in the left arm.

Bacteriological examination of the membranes from throat and nose revealed Loeffler's bacillus in great numbers; also strepto- and staphylococci, and some larger cocci in groups. Threads of leptothrix and decomposition bacteria were also present.

The author has found records of only thirty-four cases of diphtheritic hemiplegia; so that the disease is certainly to be regarded as a great rarity, specially when contrasted with the great commonness of other forms of paralysis following diphtheria—e.g., paralysis of palate, of eye muscles, and even of groups of muscles in the limbs.

The question then arises, Wherein does diphtheritic hemiplegia differ from ordinary hemiplegias on the one hand, and from the commoner forms of diphtheritic paralysis on the other?

It seems fairly well decided that ordinary diphtheritic paralysis is a peripheral paralysis, and that any changes found in the cells of the cord are to be regarded as the result of an ascending neuritis, but not as a poliomyelitis.

In the cases of diphtheritic hemiplegia, however, the causes of the paralysis are found to be those common to ordinary hemiplegias in the adult. Thus, of the thirty-four cases recorded, seven were ascribed to hæmorrhage, fourteen to embolism; in the remaining thirteen the diagnosis is not quite clear. In the six cases which were examined *post mortem*, one was due to hæmorrhage and five to embolism.

Some hold (Apolant, Oertel) that these hæmorrhages are not to be classed with the hæmorrhages of ordinary hemiplegia, but rather with the small hæmorrhages found in the peripheral nerves and centres in ordinary diphtheritic paralysis—that the difference is one of quantity rather than of quality. On the other hand, Henoch, Remak, etc., place diphtheritic paralysis and diphtheritic hemiplegia in two separate classes.

As for embolisms, no one can regard them as in any way peculiar to diphtheria; endocarditis, or simple cardiac weakness, from whatever cause, will produce emboli. According to Thomas, there is a third cause of diphtheritic hemiplegia—viz., primary thrombosis of the cerebral vessels. The author considers that his case must probably be classed in this category—viz., hemiplegia from thrombosis of the right arteria fossæ Sylvii.

Arthur J. Hutchison.

**Sanor, D. G.** (Malvern, Ohio).—*Case of Diphtheria in an Infant Nine Days Old.* "New York Med. Journ.," June 26, 1897.

THE mother had well-marked diphtheria for some days before her confinement, and died the day following parturition. The father, grandmother, and infant all developed diphtheritic symptoms more or less severe within eight days. The infant was unable to take any nourishment from blocking of the nose and throat by exudations. Antitoxin was administered three times in twenty-four hours (viz., one hundred and one hundred and fifty units, Mulford's potent antitoxin) with immediate improvement and subsequent recovery, with the exception of some slight paralysis of the muscles of deglutition. The father was treated by ordinary remedies, and the grandmother with those supplemented by one administration of antitoxin. Both recovered. The author suggests the possibility of intrauterine infection in the infant's case.

Sandford.

**Shurley, B. R.**—*Immunization with Antitoxin.* "Arch. Ped.," June, 1897.

IMMUNITY may, natural or artificial, be acquired. The latter may be obtained by: (1) inoculation with a virulent culture; (2) introduction of ptomaines or toxins into the system; (3) inoculation of attenuated virus. The following are the most extensive reports of the application of antitoxin in this direction. Biggs at the New York Infant Asylum; Morill at the Children's Hospital, Boston, 438 immunizations and no catastrophe; Roux, 128; New York Board of Health, 15,986, with one fatality; Holt, at the Nursery and Child's Hospital, New York, 110; Behring, 10,000 cases; author, 44—one child seriously ill with malaria; died. The dosage was as follows, much after that of Holt:—

|                                     |           |
|-------------------------------------|-----------|
| 1 to 3 months .....                 | 50 units. |
| 3 " 4 " .....                       | 75 "      |
| 4 " 6 " .....                       | 100 "     |
| 6 " 12 " .....                      | 150 "     |
| 1 " 2 years .....                   | 175 "     |
| 2 " 4 " .....                       | 200 "     |
| Adults, mostly pregnant women ..... | 400 "     |

**Summary.**—(1) Previous prophylactic measures have failed. (2) Immunity acquired after diphtheria cannot be increased by antitoxin. (3) Immunity is immediate. (4) Fresh serum immunizes for thirteen days. (5) Injections to be omitted in serious illnesses. (6) Other acute disorders are not affected by the serum. (7) Reaction is slight.

Lake.

## MOUTH, &amp;C.

**Huber, F.**—*Retropharyngeal Abscess.* "Arch. Ped.," June, 1897.

THIS complaint is common in New York City. They are more frequently lateral than median and the most common period is before the age of fifteen months, and are due to suppuration of the retropharyngeal glands, otherwise called the glands of Henle. They may precede, follow, or be coincident with cervical adenitis. The symptoms are characteristic: dysphagia, nasal voice or cry, head retracted, sometimes to a lateral position and rigid, with cyanosis at times, and the occasional presence of lateral fluctuation in the neck. The position of the abscess necessarily modifies the symptoms. Pus may burrow and point at such places as the angle of the jaw, the writer having seen one case of rupture through the external meatus. The better way of evacuating the abscess is with forceps; there is less bleeding, and the opening remains patent longer than after the use of the knife.

*Lake.*

**Miller, Lewis** (Brooklyn).—*Case of Pemphigus Chronicus Vulgaris of the Mouth and Epiglottis.* "New York Med. Journ.," July 2, 1897.

THIS interesting case occurred in a married man aged seventy, who was a victim of rheumatism from time to time for forty years, and had an attack of purpura hæmorrhagica some years previous, but no syphilitic history. The paper is accompanied by an excellent coloured plate showing diagrammatically the affected localities. The patient was exhibited before the American Laryngological, Rhinological, and Otological Society in New York in June, when considerable uncertainty as to the exact nature of the disease seems to have existed. Subsequently the author, in consultation with other eminent authorities, was convinced of the accuracy of the diagnosis. Microscopic examination of the "membrane" gave negative results. For some months the patient was placed upon purely syphilitic treatment without any benefit whatsoever. Subsequently a prolonged course of strychnine and iron and arsenic has apparently produced considerable improvement, but the author is not confident as to the permanency of the satisfactory result. He discusses fully the symptoms of the disease with an exhaustive bibliography of the subject, stating that he has been unable to find a single case where the disease has originated on the mucous surface reported in the English language. [We recollect having seen some years since a somewhat similar condition in a patient from New York, who had been under the care of many eminent physicians, without deriving lasting improvement therefrom. In his case the patches were confined to the fauces, soft palate, and cheek. Treatment had been in general antisyphilitic, in spite of the patient's vigorous protestations of the impossibility of any such origin.—ED.]

*Sandford.*

**Schultze, Fr.**—*On the Position of the Base of the Tongue in Peripheral Facial Paralysis.* "Münch. Med. Woch.," June 8, 1897.

It is well known that in facial paralysis and some other conditions the tongue is often protruded, not in the middle line. The author has further noted, in a few cases of facial paralysis, that the back of the tongue, both when stretched out and when in the position of rest in the mouth, lies unevenly, the half on the paralyzed side being on a lower level than the other half. For example: In one case of left facial paralysis the palate acted equally on both sides, the tongue was protruded in the middle line, but, whether at rest or protruded, the left side of the base of the tongue lay lower than the right. As the paralysis passed off this inequality also

disappeared. Two other similar cases are cited. The author is certain that this condition of the tongue is not a mere coincidence, but cannot offer any satisfactory explanation of it. The most natural explanation would be that paralysis of the stylohyoid and posterior belly of the digastric muscles, which raise the hyoid bone and which are supplied by the facial nerve, causes the condition. The author, however, could never make out any obliquity in position of the hyoid, nor is it possible by depressing one side of the hyoid to depress the corresponding side of the base of the tongue. The degree to which the facial nerve is affected is of no importance. The affection was always found in cases where the chorda tympani was involved, and never in central paralysis. Electric stimulation of the nerve had no influence on the position of the tongue.

Arthur J. Hutchison.

## NOSE, &C.

**Borgengrün.**—*On the Importance of the Irrigation of the Nose.* "Petersburg Med. Woch.," 1897, No. 24.

THE author gives the following conclusions :

1. In very young children irrigation of the nose should only be done by an experienced hand.

2. The liquid must not be injected by force. At least half an hour after the injection the patient is not allowed to blow his nose hard.

3. During the irrigation there must not be any phonation or swallowing; as soon as this happens the injection must be left off. Also, when the patient feels any sensation in the ear, injection must cease.

4. There must always be intervals after every five to ten cubic centimètres injection.

5. The liquid must not be too warm or too cold. Solutions of alum or carbolic acid must not be used.

At the end the author mentions the different instruments for irrigation of the nose.

R. Sachs.

**Concanon, James J.**—*On Retronasal Adenoids: their Removal without Anæsthesia, and a New Instrument.* "New York Med. Journ.," June 12, 1897.

THE author advocates the removal of such growths without general anæsthesia in the ordinary run of cases. He has devised an instrument for which he claims advantage over the ordinary cutting forceps and the curette. It consists simply of a modification of a cutting forceps, guarded as to its anterior surface by a thin plate of spring steel which covers the open blades, facilitating the insertion of the instrument by raising the soft palate, and also, by resting against the posterior edge of the septum, serves as a guide and protection during the operation. The author is particular in pointing out that the instrument does not supersede the Gottstein curette in all cases. He says every operator should possess both instruments.

Sandford.

**Fehleisen, F.**—*Diagnosis and Treatment of Affections of the Frontal Sinuses.* "Medical Record," Aug. 7, 1897.

In the great majority of cases of inflammatory affections of the frontal sinuses infection plays an important rôle. Usually the path of propagation is through the nose. Primary inflammations (usually acute) may occur with, or more rarely without, simultaneous disease of the nasal cavities.

The more acute cases begin with high fever, sometimes even a chill, followed

by severe constitutional symptoms. Perforation usually takes place in the anterior and inferior wall, very rarely posteriorly, towards the cranial cavity. The more usual cases are, however, the chronic, the purely chronic, as well as those whose course is interrupted by subacute attacks. Occasionally cases of frontal sinus disease are of traumatic origin. The diagnosis of acute cases is as a rule easy; chronic cases, on the other hand, are frequently mistaken for neuralgia, migraine, etc. A unilateral flow of pus in the nose should always excite suspicion of disease of one of the cavities communicating with the nose, and if it be seen to be coming from the anterior end of the thickened middle turbinate body it points to implication of the frontal sinus. In acute cases pain upon pressure is always elicited. In chronic cases pressure with a thick sound or pencil, or percussion with a pleximeter, will also cause pain. The author agrees with Kühnt in laying great stress upon the presence of pain when pressure is made upon the floor of the sinus—that is, the upper wall of the orbit. As regards treatment, radical interference is necessary in chronic cases. The usual methods hitherto practised frequently fail, or at least are extremely tedious, and often a fistula remains behind. The author highly commends Hebingen's method of extirpation of the pituitary membrane after having opened the sinus with a chisel. A large external opening is made, the front wall of the sinus and frequently a portion of the inferior wall being removed. The bony edges are bevelled as much as possible, so that no bony cavity but a shallow depression results, to which the soft parts can be pressed by a bandage. The mucous membrane is thoroughly removed, the upper part of the naso-frontal duct being also robbed of its mucous membrane. When the cavity is obliterated in this way the naso-frontal duct becomes not only superfluous, but its artificial opening may do harm by allowing inflammatory products from the nose to come in contact with the wound.

*W. Milligan.*

**Fruitnight, J. H.**—*A Frequent Significance of Epistaxis in Childhood.* "Arch. Ped.," Aug., 1897.

THE writer's attention was drawn to the frequent connection between the two conditions of heart disease and epistaxis, and he from that time examined the heart in cases of epistaxis, and *vice versa*, with a result that he obtained in a short period twelve cases, all having valvular disease and cardiac enlargement. All had had rheumatism. These hæmorrhages are due to increase of blood pressure. Fresh lemon juice is advocated as a local remedy.

*Lake.*

**Harrison, Griffin E.**—*Deformities of the Nasal Septum.* "New York Med. Journ.," June 12, 1897.

IN this paper the author dwells upon the importance of the structure in question, both as regards position and condition, upon the various affections of the mucous membrane of the upper respiratory tract. He discusses the causes of deviations of the septum, their classification and treatment, and quotes many authorities upon the subject. His experience—augmented by the study of two hundred and fifty recent cases of disorders of the throat and nose, among which he found one hundred and ninety-two with septal deformity—leads him to advise a line of operative procedure which he describes at length. He uses the saw (or knife, under certain circumstances), with the local application of cocaine, and careful preparatory and subsequent treatment with quinine, Warburg's tincture, and similar remedies. The paper is illustrated by plates.

*Sandford.*

**Laubi.**—*Lecture on Suppurations in the Accessory Cavities of the Nose.* Gesellsch. der Aerzte in Zürich, Feb. 13, 1897.

THE author has treated in the last years eighty-six cases of suppurations of the accessory cavities of the nose, seventy-five cases of suppuration of the antrum of

Highmore, seven of the frontal sinus, one of the sphenoidal sinus, and three of the ethmoidal sinus. Seven cases were combined suppurations. Only in four cases he found a connection between suppurations of the antrum of Highmore and dental caries. In fifty-four chronic suppurations of the antrum he found eighteen times (*i.e.*, thirty-five per cent.) nasal polypi. The author thinks the best way to find out if there is any suppuration of the antrum is the puncture of the antrum from the nose. The diagnosis of the suppuration of the ethmoidal sinus is very difficult, according to the author's opinion. In conclusion, he mentions all known methods of therapy of these suppurations. R. Sachs.

**Lothrop, Howard** (Boston).—*Empyema of the Antrum of Highmore. A New Operation for the Cure of Obstinate Cases.* "Boston Med. and Surg. Journ.," May 13, 1897.

DESCRIPTION of an operation for dealing successfully with obstinate cases of this disease by chiselling away the lower half of the naso-antral wall beneath the inferior turbinate, allowing free drainage, and with treatment of the mucous membrane. StGeorge Reid.

**Miller, J. H.**—*Larvæ in the Nasal Cavity.* "Med. Fortnightly," June 1, 1897. THE reporter was sent for to see a patient, apparently suffering from retropharyngeal abscess. The palate was incised and a maggot appeared. With the aid of a colleague there were removed, in all, seventy-six larvæ, one of which was hatched, and turned out to be a *Musca Cæsar*, or bluebottle fly. The patient was subject to ozæna, and the eggs had probably been deposited whilst he was asleep out of doors. Lake.

**Root, Elign H.**—*Case of Complete Nasal Obstruction in the New-born.* "New York Med. Journ.," May 8, 1897.

THE child lived a week. Insufficient respiration was marked by cyanosis after birth. *Post-mortem* examination showed complete occlusion of nasal passages by extreme enlargement of the right inferior and middle turbinals pressing over the soft septum against those of the left side. Portions of the pia mater and the vessels of the base of the brain were also engorged. No surgical interference was attempted. Sandford.

## LARYNX.

**Dionisio, Prof. T.**—*A Severe Stenosis of the Larynx on account of Complete Paralysis of the Left Recurrent Nerve, with Introflexion of the Arytenoid Region.* ("Stenosi Laringea grave, da Paralisi completa de Ricorrente Sinistro con Introflessione della Regione Aritenoidea.") "Arch. Ital. di Otol., Rinol., e Laringol.," Avril, 1897.

IN a girl fifteen years old, in whom, since two years, was present hoarseness, and since three months stridulous breathing, the author found a paralysis of the left recurrent (compression from struma). The left arytenoid cartilage was pushed anteriorly and internally, so that the point was near to reach the right vocal cord. Dionisio removed (with galvano-caustic snare) the triangular portion of tissue, which resembled a valve, but he did not succeed; and then he cut, with a Landgraf's forceps, several times the prolapsed tissue.

He is of opinion that such an improvement was caused by luxation of the crico-arytenoid joint, in consequence of the paralysis. Massei.

**Gelphe.**—*Demonstration of Two Cases of Operative Procedures on the Trachea.*  
Med. Gesellsch. der Stadt Basel, March 18, 1897.

(1) A BOY of six years, in whom it had been impossible to remove a tracheal canula after tracheotomy on account of croup for three and a quarter years. Removal of an angle going in the trachea on the superior edge of the fistula, and afterwards intubation, resulted in cure. No relapse for one and a quarter years.

(2) Strong compression of the throat, fractures of the ribs, pneumo-thorax, cessation of the blood circulation in the arteries of the right arm, with rupture of the trachea in the height of the jugulum sterni; emphysema of the skin; dyspnoea; tracheotomy, together with suture of the trachea; tracheal canula. Cure.

*R. Sachs.*

**Marchiafara, Prof. C.**—*A Case of Thorny Wart of the Larynx.* ("Sopra un Caso di verruca Spinosa della Laringe.") "Arch. Ital. di Otol., Rinol., e Laringol.," Avril, 1897.

THE relater, who had the chance of seeing in Rome this interesting specimen, gives a short account of it.

A man, forty years old, died of suffocation forty minutes after his entrance into a hospital. The autopsy showed a large tumour arising from the right vocal cord, and reaching the left as well as the opposite ventricle.

The growth, two and a half centimètres long and six to seven millimètres thick, resembled a foreign body, of a white yellowish colour, provided with many digitations of the same colour, which end in acuminate points, sharp like thorns.

The histological examination has demonstrated its epithelial nature; there is growth of the thorny epithelial cells and complete cornification of the same. It was similar to what happens in the skin: akantosis and keratosis and hyperkeratosis.

The growth, then, better deserves the name of *hard wart* than *thorny wart*.

*Massei.*

**Platt, J. E.**—*The Treatment of Wounds of the Air Passages.* "Brit. Med. Journ.," May 8, 1897.

IN thirty-five cases of suicidal wounds of the throat observed by the author, the air passages were injured in ten cases, and in the remaining twenty-five cases the wound was comparatively superficial. The position of the wound was as follows:—In one case above the hyoid bone; in three cases in the thyro-hyoid membrane; in three cases in the crico-thyroid membrane; in one case through the trachea; in one case through the thyroid cartilage and crico-thyroid membrane (two wounds); in one case through the trachea and crico-thyroid membrane (two wounds).

After carefully watching these cases, and the results of treatment, the author has arrived at the following conclusions:—

1. Suicidal wounds of the throat should be treated by primary suture in all cases where the general condition of the patient permits.
2. Antiseptic precautions are most important.
3. If necessary, chloroform should be administered, and is perfectly safe.
4. Divided muscles should be sutured, and in bringing together the edges of the skin the inversion caused by the platysma muscle should be corrected.
5. The wound in the air passage should be completely closed.
6. In many cases it is quite safe to dispense with the use of a tracheotomy tube. If a tube be deemed necessary, it should not be introduced through the suicidal wound in the air passage, but through a fresh vertical cut at a lower level.
7. Silk is the best material for suturing the larynx or trachea.
8. During the after treatment it is unnecessary, except in certain special cases, to feed by a tube or by the rectum.

9. If the above methods of treatment be adopted, not only will a very large proportion of even dangerous and extensive wounds of the air passages recover, but the period of recovery will be greatly shortened, the patient will not be exposed to the same risks of secondary inflammatory complications, and he will be much less liable to the occurrence of permanent stenosis of the trachea, or the formation of an aërial fistula.

W. Milligan.

**Richardson, C. W.** (Washington, C. D.).—*A Case of Ferichondritis of the Thyroid Cartilage.* "Ann. Otol., Rhin., and Laryng.," May, 1897.

THE patient, a young man of twenty-four years of age, presented himself with the following history. One week previously he felt a slight pain in the region of the thyroid cartilage. This steadily increased, and with the increase of pain dysphagia supervened, and, the night previous to his being seen by the reporter, dyspnœa. He had lost flesh rapidly. His temperature was 100·2° Fahr. The thyroid and cricoid were exquisitely tender, but not much swollen. The interior of the larynx was much altered; the epiglottis was swollen to twice its size. The left wall of the larynx was so swollen that its subcordal portion nearly filled the lumen. The remainder of the interior was much congested. There was no history of injury, but the father had died two years before of tuberculosis. Deep incisions were made into the epiglottis and lateral walls of the larynx, evacuating some pus, and ice applied externally. The next day there was more external swelling. A day later an incision was made to the left of the thyroid cartilage, but no pus was found. The next day there was increase of swelling and a prominence just above the sternal notch. This was cut down on and several ounces of pus found, the left ala being exposed in the abscess cavity. The patient rapidly recovered. The writer is doubtful as to the cause, being divided between trauma and tubercle.

Lake.

**Ward, M. R.** (Pittsburg).—*Papilloma of the Larynx recurring as an Epithelioma.* *Report of a Case.* "The Laryngoscope," July, 1897.

THE patient, a female aged seventeen, was the eldest of a family of ten. No family history of carcinoma existed. After recovering from an attack of *la grippe* she noticed that the voice was husky. There was no cough and no dysphagia. As the hoarseness increased in severity she consulted a physician, who told her that she had a growth upon the vocal cord, and treated her by means of applications and sprays to the larynx, but without any improvement. Later on in the same year she had the growth removed. The growth was about the size of a pea, pale pink in colour, and grew from the left vocal cord near the anterior commissure. A microscopic examination of the growth, made by a competent pathologist, confirmed the diagnosis of papilloma. For a time the voice improved, but soon a relapse ensued. About this time she consulted the author, who found the ventricular bands inflamed and swollen. The anterior half of the left vocal cord was completely destroyed by ulceration. The ulcer presented a ragged, irregular, reddish appearance, and surrounding it was an infiltration of the submucous tissue immediately below the left vocal cord, and involving the entire left half of the larynx. The right cord was congested and swollen, and the voice was entirely lost.

In the hopes that the ulcer might be syphilitic, the patient was put upon iodide of potassium, and inunctions of mercurial ointment ordered. All the symptoms, however, increased in severity, and the ulceration extended. Tracheotomy at this time became necessary. The larynx was now sprayed with absolute alcohol, but the treatment had to be discontinued after a two weeks' trial on account of the

irritation it produced. One month after the performance of the tracheotomy the author thus describes the appearances :—

“Fixation of the left and very slight movement of the right arytenoid ; inter-arytenoid space tumid and œdematous, ventricular bands obliterated by the infiltration and swelling from ulceration of the left vocal cord ; the anterior two-thirds of the left vocal cord completely destroyed ; the chink of the glottis in full inspiration probably reduced to one-fifth or less of its normal size, through which can be seen on the left side of the larynx numerous irregular nodular masses of diseased tissue, bright red in colour. No hæmorrhage until this date. The patient has paroxysmal attacks of coughing ; considerable expectoration consisting of white frothy mucus, sometimes streaked with blood, and occasionally containing shreds of necrotic tissue. Some fœtor of the breath ; complains of tenderness over the larynx ; sharp shooting pains in left ear. She is pale, cachectic in appearance, and losing flesh, although her appetite is good and she sleeps well. There is no enlargement of the cervical glands.”

The patient was now admitted into hospital and a thyrotomy was performed. A portion of the growth examined at this time proved it to be malignant. Recurrence soon took place, and a laryngectomy was performed. The patient, however, died from exhaustion four months after the laryngectomy.

The author remarks upon the possibility of benign intralaryngeal growths undergoing at times malignant degeneration, and quotes Gerhardt, who says : “F. Semon has proved that cancerous degeneration of originally benign tumours happens seldom and without anyone’s fault.”

*W. Milligan.*

## THYROID, &c.

**Davis, Gwilym** (Philadelphia).—*Removal of a Sarcomatous Thyroid Gland without an Anæsthetic.* “Med. and Surg. Reporter,” May 22, 1897.

OWING to the amount of compression the tumour exercised on the trachea, the breathing became so embarrassed that the anæsthetic had to be discontinued ; the tumour was removed successfully.

*St George Reid.*

**Nammack, Charles E.**—*A Case of Treatment of Exophthalmic Göttré by Thymus Gland Tablets.* “New York Med. Journ.,” July 3, 1897.

THE author finds the treatment so far satisfactory in this case. He enters into the subject of the etiology of the affection, accepting the theory of its being due to “perversion” of the functions of the thyroid gland, and refers to some satisfactory cases, in which the thymus gland extract had been used.

*Sandford.*

**Oppenheimer.**—*On Inflammatory Processes and Deep Suppurations in the Neck.*

“Archiv für Kinderheilk.,” Band XXII., Heft 3 to 6.

THIS is the first part of a paper on the above subject, and commences with a short description of the fasciæ, with their interspaces, and of the lymphatic vessels and glands of the neck. Proceeding, then, to the diseases, he first discusses *Retropharyngeal Abscess* (forty-eight cases). Henoch does not think that the etiology and pathogenesis of this condition has ever been satisfactorily explained, and cannot agree with Bokai and Schlitz that it is due to a suppurating lymphadenitis of the deep superior cervical glands. Neumann has produced much evidence in favour of this view, and goes even the length of maintaining that retropharyngeal abscess (or lymphadenitis retropharyngealis) is only one part of a general inflammation of the

lymphatic glands of the neck caused by conditions of the mouth, nose, pharynx, or ear. The author's investigations support Neumann's position. In forty-four cases of retropharyngeal abscess he found eight times glandular abscess on the same side; nineteen times glandular swellings on the same side; ten times bilateral glandular swelling. Seven times no gland swelling recorded. In six cases the retropharyngeal abscess and the suppuration of the cervical glands came on together; in two the cervical abscess appeared only during the after-treatment. The reverse had also been observed. In the great majority of cases the retropharyngeal abscess is lateral: eighteen left, thirteen right, five median, two diffuse, and five not specially noted. Cases are quoted illustrating the development of the abscess out of an adenitis. It is also noted in passing that retropharyngeal lymphadenitis may cause the same symptoms as adenoids.

Although his investigations lead him to believe that in the vast majority of cases retropharyngeal abscess develops out of retropharyngeal lymphadenitis, the author does not deny the possibility of the suppuration being caused in some few cases by direct entry of bacteria through the mucous membrane of the pharynx.

Age is of great importance in the etiology, as is shown in the following table:—

|                 |    |     |     |     |     |     |   |     |    |     |    |
|-----------------|----|-----|-----|-----|-----|-----|---|-----|----|-----|----|
| Years.....      | 1  | ... | 1—2 | ... | 2—4 | ... | 8 | ... | 10 | ... | 12 |
| Number of cases | 24 | ... | 11  | ... | 6   | ... | 1 | ... | 1  | ... | 1  |

In many cases no primary cause for the adenitis can be found; in others there is a history of catarrhal affections of nose and throat, and of otitis media. In connection with the former, it is noted that thirty out of the forty-four idiopathic abscesses occurred between October and February. Tuberculosis has often been blamed, but tubercle bacilli have never yet been found either in the pus or in the abscess membranes. The author relates three cases almost certainly due to tubercle. Lastly, the acute infectious fevers are universally recognized as causes of retropharyngeal abscess.

Hæmorrhages from retropharyngeal abscesses are rare. The author reports one case.

Arthur J. Hutchison.

**Reclus.**—*Bilateral Resection of the Cervical Sympathetic in Exophthalmic Goitre.*

"*Presse Méd.*," June 23, 1897, p. 268.

At the Académie de Médecine, M. Reclus reported, on behalf of M. Faure and himself, a case of well-marked exophthalmic goitre, in which the above-named operation was performed with marked success. The exact details of the proceeding are given. At the moment of section of the nerve no change was detected in the state of the pulse or exophthalmos, but in a few hours' time the former became regular though still very rapid (150), while the patient was able to close the eyelids and to sleep without nightmare. In the seventh day the thyroid enlargement had much diminished, and at the commencement of the third week all the characteristic symptoms had shown marked amelioration, and the general state of the patient, who had gained strength, had undergone a veritable transformation. Waggett.

**Williams, Dawson.**—*A Note on the Glandular Fever of Childhood.* "*The Lancet*," Jan. 16, 1897.

UNDER the term "glandular" fever (Drüsenfieber), E. Pfeiffer, in 1889, described a condition observed in childhood which he contended was an acute specific fever hitherto unrecognized. It seems probable that the infective agent, whatever it may be, obtains entrance by the pharynx or tonsils without producing a local lesion there, as is sometimes the case with the bacillus tuberculosis. The patient is usually under fourteen years of age. There is fever, anorexia, nausea, sometimes vomiting, coated tongue, constipation, and sometimes some ill-defined abdominal pain. The most prominent and characteristic symptoms, however, are

stiffness of the neck, tenderness in the anterior triangle, and some pain on movement of the head and in deglutition. There may be some undue redness of the pharyngeal mucous membrane, but throughout the whole course of the illness nothing like definite pharyngitis or tonsillitis. On the second or third day a swelling is noticed in the neck, which is found to be due to three or four enlarged glands, which can be felt below the sterno-mastoid muscle and along its anterior border. The temperature may reach 104° Fahr. The glands, which are tender, remain swollen for from two to five days, and then begin to diminish. The glands first affected are, as a rule, those of the left side. Before the glands on the left side have begun to subside, those on the right side begin to enlarge, and in a day or two attain a size corresponding to that reached by those on the left when at the maximum. The disease leaves the child in an anæmic and depressed state, which may last after all trace of the lymphatic glands—which has usually ceased in ten days or a fortnight—has disappeared. The most distinctive point is that the swelling and tenderness of the glands occur without obvious lesion of the pharynx and tonsils. The adenitis subsides spontaneously. Suppuration never, or very rarely, occurs. The incubation period is stated to be from eight to ten days.

*StClair Thomson.*

## E A R.

**Bishop, Seth S.**—*The Treatment of Chronic Suppurations of the Middle Ear.* "The Laryngoscope," Aug., 1897.

IN the treatment of chronic suppurative middle ear disease no routine method should be adopted. Each case must be judged according to its individual merits; at times a wet method of treatment being adopted, at times a dry method, and at other times a combination of both forms.

The author lays great stress upon securing thorough cleanliness, and begins the treatment by using at least a *quart* of warm sublimate lotion (1—5000) for syringing the parts. After syringing, inflation with the vapour of a ten per cent. solution of camphor-menthol is used, followed by instillations of warm solutions of peroxide of hydrogen. He has not found that by using *warm* solutions of this drug any of its efficacy is thereby diminished. The peroxide solution is left in the ear so long as any effervescence takes place. The ear is then thoroughly dried with absorbent cotton and dusted with aristol or boric acid powder. At times the author uses insufflations of nasophen—a powder which he finds useful as a drying agent. In cases where the perforation is so small as to interfere with efficient drainage it should be freely enlarged, and should there be any difficulty in getting away all secretion the author's ear aspirator may be employed with advantage.

*W. Milligan.*

**Holinger, J.** (Chicago).—*Diseases of the Labyrinth.* "Ann. Otol., Rhin., and Laryng.," May, 1897.

THE author details three cases of trauma of the labyrinth. 1. A man of twenty-six years had had, three years previously, a fall from a horse, causing concussion of the brain. He had hæmorrhage from his nose and ears; deafness and vertigo. He can now hear loud conversation. One day, whilst swimming in quite shallow water, he put his head under the surface, and lost, immediately, all sense of his position and did not know where his head was, and he only brought his head above water by chance. 2. A man had shot himself in the left ear with a small-bore pistol; he recovered, though quite deaf (the other ear was previously deaf), and with staggering gait and facial palsy. 3. The patient fell on his head, and

had hæmorrhage from the right ear. He was unconscious for two weeks ; he suffered greatly from restlessness, which he afterwards explained was due to terrible vertical rotatory vertigo, accompanied by great noise, ending in loss of consciousness. On the fourth day a cholesteatomatous mass came away from the ear ; mastoiditis supervened, but operation never became necessary, though much cholesteatoma was removed from the meatus. He was noticed later to have right-side palsy of the face. On examination, the line of fracture could be seen. *Lake.*

**Lommel, E. (Thièle).**—*The Pathological Conditions in the Middle Ear and Sphenoidal Sinus in True Diphtheria.* "Arch. of Otol.," April, 1897.

TWENTY-FIVE fatal cases (none scarlatinal) were examined by Siebenmann with the following results :—

In one (four per cent.), middle ear normal ; in two (eight per cent.), catarrhal closure of tube ; in five (twenty per cent.), catarrhal median otitis without exudation ; in four (sixteen per cent.), catarrhal median otitis with non-purulent exudation ; in thirteen (fifty-two per cent.), purulent median otitis, two having diphtheritic membrane ; in twenty-one (eighty-four per cent.), lining of cartilaginous tube normal.

The aural complications are milder than in scarlet fever, perforation having occurred in only two out of the twenty-five fatal cases. There is apparently not merely an extension along the tube, but a local manifestation of the general infection.

As regards the sphenoid cavity, the following were the conditions found :—

In one (four per cent.), normal ; in three (twelve per cent.), moderate swelling and redness of the mucosa ; in three (twelve per cent.), non-purulent fluid (one with croupous membrane) ; in three (twelve per cent.), purulent fluid. In the remainder no mention, and probably no development, of disease. *Dundas Grant.*

**Marsh, J. H.**—*Acute Suppurative Middle Ear Disease in Infancy.* "Brit. Med. Journ.," July 24, 1897.

IN the cases narrated by the author the patients were all under six months of age, and the earliest symptoms noted were restlessness, vomiting, refusal of food, and feverishness. In three cases the disease was unilateral, in the remaining one it was bilateral. In two of the cases the portion of the membrane which was perforated was Shrapnel's membrane. In one of the cases there was complete unilateral facial paralysis. The author remarks upon the difficulty occasionally attending the diagnosis of such cases in very young children, and says that early symptoms which should suggest the ear as the seat of the disease are :—

1. A constant endeavour to rub the affected ear.
2. A sharp cry of pain on pressure being made below the meatus.
3. Refusal of the child to lie upon the affected side.

In some such cases the disease is no doubt primarily tuberculous, and the signs which should suggest that the lesion has a tuberculous origin are :—

1. A slow asthenic onset.
2. Early glandular enlargement.
3. Early facial paralysis.
4. Resistance to ordinary measures of treatment.
5. The presence of other tuberculous disease.

*W. Milligan.*

**Moure.**—*On Thirty-four Cases of Mastoid Operation, including Sixteen in which the Tympanum and its Annexes were widely opened.* "Arch. Clin. de Bordeaux," Feb. and Mar., 1897.

THIS paper, occupying some sixty pages, does not contain anything particularly novel, but, representing as it does the carefully considered experience of the author on all points connected with the subject, should certainly be read by

students of otology. The various conditions of disease to be dealt with, the anatomical peculiarities which occur, the operative measures to be chosen, are all introduced with illustrative cases. As a general rule the author prefers resection of the cartilaginous meatus, so as to obtain a large opening into the artificial cavity unhampered by swollen tissues or granulations, which permits of easy access for dressing and early closure of the post-auricular fistula. *Ernest Waggett.*

**Randell, Alex.** (Philadelphia).—*Fracture of the Auditory Meatus and the Inferior Maxilla from a Fall on the Chin.* "Philadelphia Polyclinic," May 29, 1897.

THE patient was admitted into hospital suffering from some lacerated wounds about the face and bleeding from the right ear, with fracture through the ramus of the jaw, the results of a fall of fifteen feet; there was continuous oozing of blood from the ear, which was followed by a copious serous flow which maintained the suspicion of fracture of the base of the skull. On examination, however, the meatus was found to be occupied by a polypoid mass, from which there was a free, thin discharge; and on its removal, the anterior and posterior walls of the meatus were seen to be greatly inflamed, and almost in contact, the narrowing being due to protrusion of the anterior wall, owing to the crushing inwards of the thin wall of the meatus by the condyle of the jaw. The patient made an excellent recovery.

*St George Reid.*

**Stillson, J. O.** (Indianapolis, Ind.).—*Report of a Case of Double Mastoid followed by Abscess of the Spheno-Maxillary Fossa and Neck; Recovery.* "Ann. Otol., Rhin., and Laryng.," May, 1897.

THE patient, a woman of middle age, suffered with severe double suppurative otitis secondary to influenza. On examination, both membranes were inflamed and bulging, great pain and no discharge. Free paracentesis was performed on both sides; leeches ordered, to be followed by hot fomentations. The right progressed fairly satisfactorily, but on the left acute mastoiditis supervened, necessitating opening of the antrum; the membrane was again incised at the same time. Four days later pain and fever recurred, the pain being chiefly located about the left zygoma. Transillumination revealed pus in the antrum, which was evacuated through the alveolus. A further relapse occurred, and nearly a month after the mastoid operation great pain and tenderness and swelling came on behind the left ramus of the jaw, and all along the anterior border of the sternomastoid. An incision was now made along the edge of the muscle, and dissection carried down to the digastric muscle, where a large pus cavity was found. A good result was eventually obtained and the hearing power quite restored. *Lake.*

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## REVIEW.

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**Sendziak, John** (Warsaw).—*The Malignant Laryngeal Tumours (Carcinomata, Sarcomata); their Diagnosis and Treatment.* (Work rewarded at the International Prize Competition at Toulouse).—"Przegląd Chirurgiczny," Vol. III., fasc. 2 and 3.

THE author came to the following conclusions:—

1. The history of laryngeal cancer shows that they were known even in the earlier times, but, thanks to the discovery of the laryngoscope, commences the greatest development in the knowledge of laryngeal

cancer, which have been extirpated only during the last ten years, thanks to the interest which was taken at the time of the illness and death of the German Emperor Frederick.

2. The etiology of laryngeal cancer, as of cancers in general, is still dark. Long-lasting irritation seems to have a certain influence in the etiology of this disorder. Endolaryngeal operations, however, are without influence in the development of laryngeal cancers from other tumours (papillomata, etc.). The parasitic origin which has been ascribed to the cancers is not yet proved.

3. There exist observations of Baratoux, Newmann, Semon, which seem to speak in favour of the contagiousness of laryngeal cancer, as well as of the possibility of the so-called auto-infection.

4. Heredity seems to have some signification in the etiology of this disorder.

5. Advanced age, especially above fifty years, predisposes particularly to the disease. Women more rarely suffer from laryngeal cancer than men.

6. In general, cancers of the larynx are not frequent in comparison with the cancers of other organs, and with other laryngeal tumours (benign).

7. The laryngeal cancers are divided into intrinsic, which are more frequent, and extrinsic, more rare ; and lastly, mixed forms.

8. Mostly they are localized on the true vocal cords, more seldom on the epiglottis and ventricular bands, rarest in sinus pyriformis.

9. According to the histological structure the laryngeal cancers are divided in epithelioma, carcinoma medullare, and scirrhus.

10. Laryngeal cancers are primary and secondary. The latter arise *per continuitatem* or by metastasis.

11. We offer the following initial forms of the primary laryngeal cancers: (a) Carcinoma polypoides et diffusum on the true vocal cords, as well as on the ventricular bands ; (b) carcinoma ventriculare (B. Fraenkel) ; finally (c), the latent forms of laryngeal cancers (Schmidt). Mostly we have to do with the advanced forms of this disorder.

12. Not one symptom is an absolutely certain diagnostic sign of this disease. Hoarseness, as well as pain, dysphagia, fœtor ex ore, cough, secretion, salivation, bleeding, dyspnœa, and even affection of lymphatic glands, likewise cachexia, can exist or not in this disorder.

13. In the course of laryngeal cancer we discern three phases : formation of the tumour, ulceration, and destruction of the cancer. Mostly the development of the laryngeal cancer is fairly slow.

14. In the diagnosis of the cancer of the larynx, besides the above symptoms, which have only a relative signification (just as also the transillumination of the larynx), above all is important the laryngoscopic examination, which permits to state the appearance and localization of the tumour, as well as the diminished or entirely deprived mobility of the affected cord, or half of the larynx (Semon).

15. The most important method of deciding in most cases of laryngeal cancers, is the microscopical examination of the extirpated fragments of the tumour, although also here one may be mistaken, which depend from the anatomo-pathology or are quite independent. The latter is the case

with too small or too superficially extirpated fragments given to be examined; further, in cases of the existence of the so-called mixed tumours of the larynx (carcinoma and papilloma, etc.).

16. The differential diagnosis of laryngeal cancer from laryngitis, chorditis hypertrophica, from benign laryngeal tumours (papilloma, polypus, cyst), finally, from the so-called pachydermia and perichondritis of the larynx, is pretty difficult. Most important, besides the diminished mobility of the affected vocal cord, is the microscopical investigation of fragments of laryngeal tumour.

17. From syphilis of the larynx—namely, from its ulcerating forms—it is in most cases very difficult to distinguish from the ulcerated laryngeal cancer, the more so as there exist also mixed forms (Hunter Mackenzie). A very important method is here the so-called *ex juvantibus*—i.e., application of specific mixed with treatment (Kr. and Hg.).

18. It is likewise hard to distinguish the laryngeal cancer from the tuberculosis of the larynx, as here also the combination of both these affections is possible (case of Wölfenden); not frequent, besides the laryngeal cancer, the tuberculosis of the lungs can exist.

19. By far the easier is the diagnosis of laryngeal cancer from lupus, catarrhal ulcerations, sarcoma, finally from secondary cancers.

20. The prognosis of laryngeal cancer is not so bad as it was formerly supposed. Without doubt this disease, naturally in the early periods, is curable.

21. In the history of the treatment of laryngeal cancer, I discern four phases: (1) The therapeutic nihilismus (ancient times); (2) birth of the rational therapy (from 1873, i.e., since Billroth first executed total laryngectomy); (3) the period of great oscillations of our opinions in regard to the therapy of laryngeal cancer (from 1881, i.e., since the International Congress in London); (4) the phase of the sober critic (from 1888 to the present time).

22. The statistic cyphers have only relative signification in the appreciation of the operative results in regard to the cancer of the larynx. The collection of a good statistic is very difficult.

23. My statistic comprises four hundred and fifty-two cases of laryngeal cancers, and fifty of sarcoma, operated by means of difficult methods. (In the statistic, many inexact observations, as also the cases which have been operated after 1894, are excluded.)

24. The endolaryngeal method in laryngeal cancer (thirty-two cases in my statistic) gives twenty-five per cent. of favourable result, i.e., such where after one year no relapse ensued, further 40·7 per cent. of relapses. It deserves to be applied in suitable cases (polypoid cancer).

25. Tracheotomy, as a therapeutic method, has no value in laryngeal cancer. It is, however, important as a symptom (in case of suffocation), likewise as a preliminary method before greater operations.

26. Thyrectomy (ninety-two cases in my statistic) is a very valuable therapeutic method in the treatment of cancer of the larynx. It gives 21·7 per cent. of favourable results (of which 8·7 per cent. of definitive recoveries), further 53·3 per cent. of recidives. It is almost harmless (9·8 per cent. of deaths after operation). Besides the therapeutic impor-

tance, this method has also a valuable diagnostical signification (before the extirpation of the larynx).

27. Subhyoid pharyngotomy (eight cases) can be successfully applied in cases of cancers of epiglottis, pharynx, and tongue, *i.e.*, above all in cases of external cancers.

28. Partial laryngectomy in laryngeal cancer (one hundred and ten cases in my statistic) gives 22·7 per cent. of favourable results, of which 11·8 per cent. of definitive recoveries. It is most decidedly the best therapeutic method in this disease, naturally in proper cases (only 28·2 per cent. of relapses and 26·3 per cent. of deaths).

29. Much worse results gives the total laryngectomy in laryngeal cancer (one hundred and eighty-eight cases). Favourable results have been obtained in 12·8 per cent., of which only 5·85 per cent. of absolute recoveries. At any rate this method should be applied without hesitation in the suitable cases. It gives 32·45 per cent. of relapses, and 44·7 per cent. of deaths.

30. The most frequent cause of death after laryngectomy is the septic inflammation of the lungs (Schluck pneumonia), further collapse, etc.

31. As regards the technique of this operation, the tracheotomy (inferior) must be above all executed a couple of weeks before, then the windpipe tamponned, in order to avoid the trickling of the blood into the respiratory ways, which can be attained best by means of Trendelenburg's tampon-canula, or still better with Hahn's press sponge canula. Then the larynx will be separated best in the direction from above down, without leaving behind the epiglottis.

32. There exist different modifications of extirpation of the larynx (laryngectomie sans trachéotomie préalable, Périer; méthode sous-perichondréale, Péan; modified laryngectomy of Solis Cohen, etc.).

33. The post-operative treatment is in this disease of the greatest importance, and likewise the nutrition of the patients after operation.

34. The artificial larynx (of Czerny, Billroth, Gussenbauer, Hueter, Foulis, Von Bruns, Labbé, Cadier, Wolff, Périer, and, finally, E. Kraus, and prothetic apparatus of Péan) can be applied, although they are not necessary, as is proved in the cases of Schmidt, Solis Cohen, etc.

35. The indications and contraindications to the operative treatment of laryngeal cancer are of great importance. As a rule the patient must be operated on as soon as possible. One contraindication, and only to a certain degree, is a very extended pathologic process (great affection of glands, pharynx, etc.); further, a very bad general state and complications on the part of other organs, especially of the lungs.

36. The symptomatic treatment must be employed only in cases where the operation cannot be performed. It is generally unsuccessful.

37. The laryngeal sarcomas happen much more seldom than the cancer of the larynx.

38. In regard to structure, they are mostly sarcoma fusi et globocellulare.

39. The course of the laryngeal sarcoma is quicker; the symptoms similar to those with which we meet in cases of laryngeal cancer.

40. The diagnosis of sarcoma of the larynx is very difficult. The

most important criterion, as here also, a microscopical examination of the extirpated fragments of the tumour.

41. The prognosis is much better than in laryngeal cancer.

42. The treatment can be: endolaryngeal extirpation of the tumour, pharyngotomy subhyoidea, thyrectomy, and, finally, extirpation of the larynx (total and partial).

43. So, as in laryngeal cancer, the method of partial laryngectomy proved to be the most successful. The total extirpation of the larynx in sarcoma gave the best results (36·3 per cent., of which 27·3 per cent. were absolute recoveries).

44. The remaining operative methods (partial laryngectomy, laryngofissure, and endolaryngeal extirpation of the sarcomatous tumour of the larynx) can also give relatively good results. In this manner, in suitable cases, they must be applied without hesitation.

45. *In general, basing upon the cyphers obtained from my statistics of four hundred and fifty-two operated cases of laryngeal cancers and fifty of sarcoma, in which there were obtained good results in fifty in cases of cancer and eighteen of sarcoma (of which thirty-seven and six were absolute recoveries), we must come to the conviction that there is only one rational operative treatment of malignant laryngeal tumours, and it should be the most often applied in suitable cases.*

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*Maxillary*—BABER, B.M.J., '97, I., 508; BARON, B.M.J., '97, I., 263; MENDEL, Journ. des Pract., Nov., '96; POTTER, B.M.J., '97, I., 652; RIPAULT, Ann. des Mal. de l'Or., Nov., '96; SAINT-HILAIRE, Ann. Inter. de Lar., IX., 665, '96; TILLEY, B.M.J., '97, I., 197; TURNER, B.M.J., '97, I., 508. *Sphenoidal*—FOUCHER, Rev. Inter. de Rhin., Oct., '96. *Frontal*—MILLIGAN, B.M.J., '97, I., 854; COLLIER, Lancet, June 12, '97.

#### II.—BRAIN DISEASE SECONDARY TO NASAL DISEASE.

DREYFUS, B.M.J., '97, I., 1417; LUZZATI, Ann. des Mal. de l'Or., Feb., '97; MILLER, B.M.J., '97, I., 913.

#### III.—NASO-PHARYNX.

*Exostosis of*—LICHTWITZ, Arch. Inter. de L., O., R., Jan., Feb., '97. *Adenoids*—MACEVOY, B.M.J., '97, I., 1380; and B.M.J. Epit., '97, I., 412.

### VI.—DISEASES OF LARYNX, &c.

#### I.—PARALYSIS AND PARESIS OF CORDS.

CRISTON, B.M.J., '97, I., 790; STEPHENS, B.M.J., '97, I., 716.

#### II.—NEW GROWTHS.

MARSII, B.M.J., '97, I., 855; MACKENZIE, Lancet, Feb. 15, '97.

## III.—TRACHEA AND BRONCHI.

DAVIDSON, B.M.J., '97, I., 591. *Rupture of*—LANE, Lancet, Mar. 6, '97. *Abscess around*—MASSEI, Rev. Hebdomadaire de L., O., R., Feb. 13, '97. *Foreign body in*—MARSHALL, B.M.J., '97, I., 1158. *Asthma*—KUSS, B.M.J., Epit., '97, I., 415.

## VII.—THYROID.

*Thyroid Tablets in Goitre*—FAWSSETT, B.M.J., '97, I., 18. *Exophthalmic Goitre*—JONNESCO, B.M.J., Epit., '97, I., 204. *Diseases of*—STEWART, B.M.J., '97, I., 1040. *Exophthalmic Goitre*—SUTCLIFFE, B.M.J., '97, I., 782.

## VIII.—THYMUS.

*Persistence of, in Graves' Disease*—EDMUNDS, B.M.J., '97, I., 333. *Secretion of*—SVEHLA, B.M.J., Epit., '97, I., 437.

## IX.—ŒSOPHAGUS.

*Stricture*—MARSH, B.M.J., '97, I., 490; BOWES, B.M.J., '97, I., 586. *Malignant Disease*—CARRIÈRE, Arch. Clin. de Bordeaux, Jan., '97. *Foreign Bodies in*—PÉAN, Bull. Acad. de Méd., Dec., '96; MARSH, B.M.J., '97, I., 267.

## X.—DISEASES OF THE EAR.

*Typical Cases*—FIELD, B.M.J., '97, I., 1462. *Injuries, etc.*—YEARSLEY, B.M.J., '97, I., 860. *Audition with Ankylosis*—GELLÉ, Arch. Int. de L., O., R., Jan., Feb., '97.

## I.—HÆMATOMA.

OLIVER, B.M.J., '97, I., 81; THOMSON, B.M.J., '97, I., 589.

## II.—DANGEROUS SEQUELÆ OF MIDDLE EAR DISEASES.

*Brain Abscess*—BARLING, B.M.J., '97, I., 1467. *Cerebral Abscess*—GRUNERT, B.M.J. Epit., '97, I., 167. *Cerebellar Abscess*—RIDLEY, Lancet, Jan. 9, '97; WALKER, B.M.J., '97, I., 578. *Non-Tubercular Bacterial Meningitis*—B.M.J., '97, I., 1092. *Lat. Sinus Pyæmia*—RIVIÈRE, Arch. Inter. de L., O., R., Jan., '97; ROBSON and KEIGHLEY, Lancet, Feb. 6, '97.

## III.—VERTIGO.

BARR, B.M.J., '97, I., 1094; FERNS, Ann. des Mal. de l'Or., Mar., '97; COZZOLINI, Ann. des Mal. de l'Or., Feb., '97.

## XI.—NEW INSTRUMENTS.

*Spring Tonsil Guillotines*—POPHAM, B.M.J., '97, I., 470, and SPICER, B.M.J., '97, I., 1291. *Artificial Larynx*—STUART, Lancet, April 17, '97. *Nasal Duct Obstruction*—BICKERTON, B.M.J., '97, I., 1536. *Tonsil Forceps*—SMITH, B.M.J., '97, I., 1291.

THE  
JOURNAL OF LARYNGOLOGY,  
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## ABSTRACT OF REMARKS ON ATROPHIC ENDORRHINITIS.<sup>1</sup>

By JOHN N. MACKENZIE, M.D., Baltimore,

Clinical Professor of Laryngology in the Johns Hopkins Medical School,  
and in the University of Maryland.

IN order to confine this discussion within reasonable bounds, I shall address myself strictly to the pathological anatomy of so-called atrophy of the intranasal structures, as announced on the programme. Let us consider the problem from a purely anatomical standpoint, and inquire, What is the nature of the structural changes found, and in what order do they appear?

I wish at the outset to disclaim any idea of opening the ozæna question. That has been done by Dr. Casselberry in his paper just read. As every gynæcologist has his vaginal speculum, so every rhinologist has his theory of the causation of ozæna. Speculations on the subject are as multitudinous as the stars. One thing, however, should be remembered—ozæna is not atrophy, although frequently a symptom of that condition. It is only in this way that it is at all related to our subject.

At the beginning of our inquiry I would lay stress upon the fact (to look at the subject from a novel standpoint) that in the condition involved in our conception of so-called hypertrophic and atrophic nasal catarrh we are dealing not simply with an inflammation of a mucous membrane, but with definite structural changes in an important organ of respiration, using the term organ in its highest physiological sense. This organ of varied function consists anatomically essentially of myriad vessels and blood spaces in wonderfully exquisite co-relationship, bounded on the one side by periosteum, and on the other by mucous membrane, set in a network of connective tissue containing glands, muscle, and elastic fibre, by which is rendered possible the alternate erection and collapse of the

<sup>1</sup> Read before the American Laryngological Association at its Nineteenth Annual Congress.

tissues which is essential to its proper and complete discharge of function. Call these bodies by whatever name you may—erectile bodies, corpora cavernosa, nasal lungs—we have a definite peculiar anatomical arrangement of tissues endowed with specific physiological function and fulfilling a manifest and manifold destiny in the organism.

A great deal of confusion surrounds the subject under discussion from (1) a loose and inexact use of the term "atrophy," as applied to the changes under review; and from (2) failure to distinguish between the different forms of atrophy which may affect the nasal mucous membrane, and the causes that conspire to produce them.

A lazy disregard of certain elementary facts in pathological anatomy has thus led to hasty generalization and inadequate hypothesis.

Atrophy is the diminution in size of an organ, the result of diminution in size and disappearance of the structural elements of the tissues. In this process the highly specialized portions suffer, while the connective tissue may not show any wasting—indeed, is often notably developed in excess. There are two forms of atrophy—simple atrophy and atrophy with degeneration. Simple atrophy may be the result of (1) excessive waste; (2) impaired nutrition; (3) pressure; (4) impaired functional activity; or, finally, (5) imperfectly defined trophoneurotic changes. The consideration of simple atrophy of the intranasal structures opens up a vast field of almost boundless horizon which has been heretofore very imperfectly explored. Except, perhaps, in the case of pressure atrophy, we know little or nothing of the subject. It is, of course, conceivable that simple intranasal atrophy may be produced by all of the causes indicated above; but we have very little exact knowledge concerning it. The atrophy of which I shall speak is not a simple atrophy, but an atrophy with degeneration. The very use of the term "atrophic rhinitis"—or, more correctly, "endorrhinitis"—excludes the idea of simple waste and presupposes that of degeneration—the degeneration of an inflammatory process. Just here let me say that the use of the terms "hypertrophy" and "hyperplasia," as expressive of the changes found in chronic intranasal inflammation, is unfortunate. True hypertrophy and hyperplasia—if they exist—must be exceedingly rarely found. If, then, we are to retain the terms, we must not insist on a too rigid application of their definition as given by the pathologist.

It was in attempting to bring order out of the existing chaos of terminology that some years ago<sup>1</sup> I proposed to substitute the term "cirrhosis" to denote the changes found in the condition under discussion. Here, too, we have another unfortunate term, for which we have to thank Laennec. Of its various synonyms, sclerosis is perhaps the most exactly descriptive. Cirrhosis or sclerosis is a chronic inflammation in which atrophy of the specific tissues is associated with hypertrophy of the connective tissue. It begins either acutely or more insidiously, and is characterized by atrophy and degeneration of the gland tissue, by hypertrophy of the connective tissue, by cellular infiltration, by the formation of granulation tissue, and by obliteration of old vessels and by the

<sup>1</sup> "Some Notes on the Pathology of Intranasal Inflammation." "Medical News," Philadelphia, Oct. 4, 1884.

formation of new (Ziegler). In so-called intranasal hypertrophy and atrophy we have two forms, or, to speak more accurately, stages, of the sclerotic process—viz., a stage of hypertrophic and a stage of atrophic sclerosis—and these terms I would propose to substitute for those in common use. Instead of speaking of a stage of hypertrophy and a stage of atrophy, therefore, we would indicate the condition found by the terms “hypertrophic” and “atrophic sclerosis.”

Now in regard to the etiology of the process. Apparently the most common cause is the *chronic irritation produced by inflammation of the nasal mucous membrane*, the chronic catarrh extending to the interstitial tissue of the erectile organ. This chronic catarrh may or may not be originally due to the action of micro-organisms.

In another class of case the irritation causing the sclerotic process may reach the nose through the blood, as an *infection*, as in the case of syphilis and tuberculosis, or as an *intoxication* as in the case of alcohol.

That the atrophic, or, to speak more exactly, the sclerotic, process owes its origin to the constant contact of pus with the nasal mucous membrane, either as a product of disease of that structure or in the form of discharge from the accessory sinuses, is a view that has been gravely maintained by more than one observer. In all pathology there is no parallel to such a condition.

What is the nature of the sclerotic process? Are the changes in the connective tissue primary or secondary? Do the highly specialized elements suffer first and disappear, to be replaced later by a connective tissue scar, or is their disappearance due to a primary contraction of an inflamed and hypertrophied interstitial tissue? It will be the task of the future to answer these questions. In other organs of the body, as, for example, the liver and brain, it is probable, though not yet completely proved, that in the cirrhotic process the highly specialized tissues suffer first. In the liver, especially, it seems probable that the disease originates in the hepatic cells, and that scar tissue subsequently takes their place. It is quite possible that this may be the chain of events in sclerosis of the intranasal tissues, especially in those cases in which the irritation producing the sclerosis reaches the erectile organs through the blood, either as an infection or as an intoxication. In cases, on the other hand, which presumably result from an extension of inflammation of the mucous membrane to the interstitial tissue of the turbinated bodies, the connective tissue changes are doubtless primary, and the highly specialized elements disappear as the result of the contraction of the newly formed interstitial tissue. Not to mention other evidences of its contraction, the frequent presence of cysts and the septa formations which I have described elsewhere<sup>1</sup> certainly point to the presence of a strong constricting force. That the highly specialized tissues do not, however, always disappear by virtue of such constriction is shown, I think, in the specimens taken from the ethmoid region, exhibited at the last meeting of this Association.<sup>2</sup> Here the glands are being destroyed by young granulation tissue.

In considering the order of appearance—the chronological relation-

<sup>1</sup> “Transactions of the American Laryngological Association, 1885,” p. 159.

<sup>2</sup> See “Transactions, 1896.”

ship of the two stages of nasal sclerosis—let us first inquire, Is the process ever *ab initio* atrophic?

I do not by any means wish to deny the possibility of such an occurrence. It is quite conceivable, indeed, that, as the cirrhotic changes sometimes occur without antecedent hypertrophy in the liver, so they may originate in the nose in a similar manner. It is also possible that the sclerotic process may take its departure from diseased conditions of the periosteum, and may not be heralded by apparent increase in volume of the tissues.

The problem is a difficult one, for the reason that the affection often develops very insidiously, and its stage of inception and course are therefore imperfectly known. While we cannot dismiss from consideration the idea of primary degenerative atrophy of the intranasal tissues, the clinical and pathological facts in our possession indicate that, if it exist, it must be reckoned among the exceptions to the rule.

There is no direct histological or clinical proof that the sclerotic process is atrophic from the beginning. No man has demonstrated microscopically or on the cadaver, nor has occasion ever arisen, except in a few doubtful cases, for clinical demonstration of the possibility of such an occurrence. In reply to the stricture of Dr. Casselberry that ozæna often occurs at a period too early in life to warrant the assumption of a pre-existing hypertrophy, I would say that ozæna and atrophy are not convertible terms. Ozæna is not a disease *per se*, but a symptom of a number of pathological states. As is well known, it is often present in hypertrophic catarrh. Ozæna in children does not necessarily imply atrophy. In children, too, as in the adult, the transition period from hypertrophy to atrophy may be very brief, the wasting occurring rapidly from malnutrition, due to constitutional taint or other causes. The congestion or hypertrophy that precedes the stage of complete waste, too, is not always strikingly marked as regards the naked-eye appearances, and is, therefore, liable to be overlooked.

Assuming that atrophy occurs soon after birth, it is possible that it may have been antedated by a catarrh *in utero*. This is, of course, assumption, but not extravagant speculation.

That the atrophy is usually preceded by a hypertrophic stage is rendered highly probable from a number of clinical and pathological facts. If the clinical history be accurately taken it will often point to a pre-existing catarrhal hypertrophic condition. The hypertrophy—that is to say, the swelling—need not necessarily by any means be very pronounced. Why it should in one case terminate in fibrosis, leading to the formation of the dense so-called “hypertrophies,” or to formation of nasal polypi, and in another case terminate in atrophy, are questions as yet unsolved.

The rapidity with which the hypertrophic passes into the atrophic form is proportionate, in all probability, to the possession of some constitutional taint, such as, for example, the congenital or acquired form of syphilis. The early appearance of atrophy in some cases is dependent doubtless, too, upon certain modes of life and other conditions which influence the rate of progress in simple inflammation in general. I have

seen it occur with rapidity after the profound impression made upon the nutrition of the parts as the result of acute systemic disease.

If the patient be not under observation from the outset, it may be difficult to establish with certainty the chronological relationship of the two stages ; but, so far as my observation goes, I have never been able to satisfy myself of the independent origin of the atrophic form.

The pathological history of the process is, moreover, that of the conversion of hypertrophic changes into those of an atrophic form. In the rhinoscopic picture, in the microscopic section, the processes of hypertrophy and atrophy are found side by side. More than that : the atrophic changes are more pronounced in situations in which the catarrhal inflammation originally developed. Thus, for example, if the disease originate as a catarrh of an accessory sinus, the atrophy is more pronounced in the latter situation, the nasal mucous membrane proper presenting evidences of simple or hypertrophic catarrhal inflammation. If, on the other hand, the disease originate in the nasal fossæ, the morbid condition of the sinus, if such exist, is that of simple or hypertrophic inflammation. Finally, as the hypertrophic variety almost always commences in the respiratory portion of the nostril, so, in the atrophic form, the region of the inferior meatus, the classical seat of atrophy, is the first to be destroyed.

Weighty evidence in support of the position that atrophy is usually preceded by hypertrophy in cases that follow catarrhal inflammation is furnished by the microscope. Here the processes are found side by side in the section, or portions of the membrane show signs of atrophy, while in others, where the disease is less advanced, hypertrophic changes are discovered.

The above considerations encourage the belief, I think, that in *sclerosis which is the result of intranasal irritation* the atrophy is usually preceded by a hypertrophic or congestive stage.

I have not elaborated the propositions which form the basis of my remarks this morning.<sup>1</sup> Until they can be successfully overthrown it may be well to accept them—provisionally, at least.

In the absence of direct histological and clinical proof of such a condition ; in view of the rapidity with which, in some cases, the hypertrophic variety passes into the atrophic ; in consideration of the many obvious difficulties in the way of certain historical data in its favour ; and in the light of anatomical investigation, the question, "Is intranasal sclerosis ever *ab initio* atrophic?" must, for the present at least, be answered in the negative.

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<sup>1</sup> For an elaboration of the subject, see the article in the "Medical News" already referred to, and also the chapter on Cirrhotic Rhinitis in Burnett's "System," Vol. I., 1893.

**TWO CASES OF PARALYSIS OF THE LEFT VOCAL CORD OF ALCOHOLIC ORIGIN.<sup>1</sup>**

By DUNDAS GRANT (London).

It has doubtless happened to every laryngologist to have met cases of paralysis of a vocal cord the cause of which it has been difficult or even impossible to discover. The general recognition of the different forms of peripheral neuritis, and especially of those of toxic origin, the alcoholic being the most common, is comparatively recent, and in the treatises on laryngology it is very meagrely treated, and in some omitted altogether.

The first case is that of a clergyman, aged forty, who consulted me on account of weakness of his voice which came on suddenly at the commencement of a service. The condition persisted, and it had become necessary for him to find a remedy or to resign his position. I found complete immobility of the left vocal cord, both in respiration and phonation in the cadaveric position. There were some very limited movements of the cartilage of Santorini, but the thorax appeared to be absolutely normal, and it was impossible to elicit any evidence of previous specific infection in spite of the absolute candour of the patient. In inquiring further into his previous ailments I elicited the fact that he had recently suffered from sciatica in the left side, from which he had not yet completely recovered. He was still subject to paroxysms of pain, and there was a considerable degree of anæsthesia of the skin of the affected limb. It seemed to me more than probable that the so-called sciatica was a neuritis, and that the paralysis of the vocal cord depended upon an identical condition affecting the left recurrent laryngeal nerve.

It only remained, then, to discover some cause sufficient to account for the production of these neurotic conditions. There were no signs of locomotor ataxy; and I thought of toxic neuritis. There was no indication of lead, mercury, or arsenic; and it was, therefore, necessary to approach the question of alcohol. There was complete absence of appetite in the morning, and the patient had frequently suffered from disturbances of the "liver" (acute gastritis); and I observed a singular negligence with regard to his dress, and even the general care of his person, which was quite out of harmony with his professional and social position—in fact, I suspected a tendency to the abuse of alcoholic stimulants. The patient admitted, in fact, that he drank at least a pint of strong stout at each meal, and that, in addition, he spent the evening, up to a late hour, in reading and drinking brandy and water.

He had not the slightest idea that his excess in alcohol had given rise to his symptoms; but he allowed himself to be convinced, and undertook to make the sacrifice necessary for his recovery—namely, complete abstinence from alcohol. He obtained, at the same time, a short period of rest from his professional duties, during which he took fairly large doses of tincture of *nux vomica*. After a rest of some

<sup>1</sup> Read before the Soc. Franc. de Laryng., etc., April, 1897.

weeks he returned to his duties, and found his voice as strong and reliable as before his illness. I was able to assure myself, by laryngoscopy, that the movements of the vocal cord had again become normal.

At the present time the voice is excellent, the larynx is natural in every respect, and the sciatic symptoms have disappeared. The patient has lost his morning anorexia, he has certainly improved in his general condition, and he fulfils his duties without the least difficulty.

Case II. A lady, of middle age, consulted me on account of an obstinate cough, which fatigued her both during the day and prevented her from sleeping at night. Beyond a slight bronchial catarrh I found nothing except a well-marked paralysis of the left vocal cord. During the examination of the chest I observed the cicatrix resulting from the amputation of the right breast, which had been carried out several years before on account of a tumour suspected of being cancerous. Under these circumstances I feared the development of a carcinomatous condition in the mediastinal glands, but beyond the paralysis of the left recurrent nerve there was no other sign of it. There was further no indication of syphilis or of tuberculosis. I then elicited that the patient complained of well-marked nausea and loss of appetite in the morning, and that she was subject to bilious attacks.

I ordered, in the way of medicine, small doses of the hydrochloric solution of arsenic, and recommended the greatest discretion in the use of alcohol. I wrote to her family medical attendant, communicating to him my suspicion that there was a tendency to excess in alcohol, and asking him whether he had any reason to share it. He replied that such an idea had not occurred to him, and that he could hardly believe that the lady, who was well known and respected, could be thus affected. Two weeks later she returned, stating that the morning nausea had considerably diminished, a very usual result of small doses of arsenic, but that she was still troubled with a cough. Her general condition had improved, but the vocal cord was still completely paralyzed. The husband, who accompanied her, made the spontaneous inquiry as to whether the use of brandy would be injurious to his wife, because she had acquired the habit of taking frequent doses of it, on account of certain cardiac attacks, and that she had poured the spirit into a large glass without measuring it. This confirmation of my suspicions allowed me to speak openly, and I insisted that the daily allowance of stimulants should be limited to two glasses of Marsala. I added to my prescription a small proportion of aromatic spirits of ammonia, and ordered for the cough pastilles of codeia. After another fortnight I saw the patient once more. The general condition had greatly improved; the husband assured me that the cough had diminished both by day and by night, and I made out some distinct movements of the left cord of slight extent but quite unmistakable. On examination at the end of another ten days the movements were still more pronounced, and I ventured to assure the patient that the affection of the larynx did not depend in any way upon malignant disease.

In this case also it seems to me certain that I had to deal with a peripheral neuritis of the left inferior laryngeal nerve of alcoholic origin.

Such observations cannot be unique, but I find no similar cases

recorded, and in bringing them before the Society I merely wish to draw the attention of my *confrères* to a cause of laryngeal paralysis which may easily pass unrecognized, but which deserves to be taken into consideration when we have to deal with obscure cases.

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## SOCIETIES' MEETINGS.

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### TWELFTH INTERNATIONAL MEDICAL CONGRESS, MOSCOW.

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*Meeting, 19th August, 1897.*

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THE Congress was opened this day at two o'clock in the afternoon, in the Grand Theatre, by the Grand Duke Serge. The representatives of the nations delivered their addresses of congratulation and thanks, and the first general addresses were read by Profs. VIRCHOW, LANNE-LONGUE, and Dr. LAUDER BRUNTON.

#### SECTION XII.B.—LARYNGEAL AND NASAL DISEASES.

##### *Organizing Committee:*

*Administrator*—Prof. E. M. STEPANOFF (Moscow). *Secretary*—Dr. A. F. BELAYEFF (Moscow).

*Members of Committee*—Dr. G. N. BOYEFF (Moscow); Dr. A. F. BELAYEFF (Moscow); Prof. B. V. VERHOVSKY (St. Petersburg); Prof. N. M. VOLKOVITCH (Kiev); Dr. A. E. HAUDRING (Moscow); Dr. T. E. HERYNG (Warsaw); Prof. M. M. LOMIKOVSKY (Harkoff); Prof. V. N. NIKITIN (St. Petersburg); Dr. K. A. RAUCHFUSS (St. Petersburg); Prof. N. P. SIMANOVSKY (St. Petersburg); Dr. A. J. SOKOLOVSKY (Warsaw); Dr. M. A. FROHNSTEIN (Moscow); Dr. G. N. SCOTT (Moscow); Dr. A. V. JACOBSON (St. Petersburg).

The first meeting of Section XII.B., Laryngeal and Nasal Diseases, was held in the Library of the University, at 7.30 p.m., when Prof. STEPANOFF welcomed the members of the Section, and very briefly indicated the important lines along which the subject had advanced since the last International Meeting at Rome. He referred to the loss sustained by the death of distinguished laryngologists. He then stated that the business before the meeting was to choose a President and Secretary, and Vice-Presidents, who would take the chair at meetings.

Prof. STEPANOFF was elected President, and Dr. BELAYEFF Secretary.

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*Meeting, 20th August, 1897.—Prof. HEYMANN in the Chair.*

The first subject for discussion was the progress made in the treatment of laryngeal tuberculosis since the last International Congress. Dr. GLEITSMANN opened the discussion.

In some introductory remarks the author insisted on the importance of always remembering that laryngeal tuberculosis is only, as Semon has so well said, a local manifestation of a general infectious process. The percentage of cures is still very small. The treatment of laryngeal tuberculosis is best considered under three headings, viz., general medicinal, local medicinal, and surgical.

I. *Medicinal*.—The general pulmonary condition must be improved as far as possible. G. does not share Stoerk's opinion of the worthlessness of creosote. He prefers to use the carbonate compounds, and has seen good results follow the use of carbonate of guaiacol, and still more of benzosol. Tuberculin, antiphthisin, antitubercle serum (Paquin), he has found unsatisfactory. Maragliano's serum he has no experience of, and cannot yet say anything on Koch's new tuberculin.

II. *Local applications*, by means of atomization, inhalation, and insufflation, have long been and will continue to be used.

Intratracheal injections of creosote and guaiacol (Botey), and of benzoinol, eucophen, and menthol (Barton), have been favourably reported on. Lactic acid still maintains its position as the most widely used application for laryngeal tuberculosis. Sulpho-ricinate of phenol also has been exceedingly favourably reported on (Ruault and Heryng), while Simanovsky, Spengler, and others have had successful results from the use of para-chlor-phenol. Lublinsky and Seifert, on the other hand, found this a very painful and not specially efficacious remedy. Lastly, enzymol has given good results in the hands of Murray.

III. *Surgical treatment* comprises (1) incision, (2) curettement, (3) submucous injection, (4) electrolysis, (5) galvano-cautery, (6) laryngotomy, (7) laryngectomy, (8) tracheotomy, and (9) intubation.

Two years ago the author read a paper on curettement before the American Laryngological Association, and again, along with Heryng and Krause, before the British Laryngological Association; and he is glad to be able to report that since that time curettement has steadily advanced in favour, both in America and in England.

The main objections urged against this treatment are: (1) that we cannot touch the concomitant pulmonary disease; (2) that it is often impossible to remove the whole of the diseased tissue in the larynx. The answer to both these objections is simply this, that the cases must be carefully selected. The removal of all the diseased tissue cannot often be accomplished in one sitting; repeated operations may be required (*e.g.*, Hajek operated twelve times on one case before obtaining a definite cure). Curettement is indicated (1) in cases of primary laryngeal tuberculosis; (2) in circumscribed ulcerations and infiltrations; (3) in dense infiltrations of the arytenoid region and of the posterior ends of the ventricular bands, and tuberculous tumours of the epiglottis; (4) in the incipient stage of pulmonary disease with little fever and no hectic

symptoms ; (5) to relieve dysphagia even when advanced pulmonary disease co-exists. It must be understood that in the last group of cases the operation is undertaken, not with any hope of cure, but simply as the most rapid and effective method of relieving the distressing dysphagia.

Contraindications are: (1) advanced pulmonary disease with hectic ; (2) disseminated tuberculosis of larynx ; (3) extensive infiltrations producing severe stenosis. In these, tracheotomy or laryngotomy must be considered.

Of other surgical methods the author referred (1) to Dr. Chappell's favourable reports on submucous injection of creosote in oil of winter-green and castor oil (5j.—3i.). (2) To Dr. Scheppegrell's cupric interstitial cataphoresis. Spherical electrodes of chemically pure copper are used, and the results reported are good. This treatment is much simplified by the autoscope. The author considers it worthy of further investigation. (3) To laryngotomy and tracheotomy, no very definite opinion as to their values being offered.

In summing up, the author maintained that during the last three years considerable progress had been made in the surgical treatment of laryngeal tuberculosis, and that still greater progress may be expected when patients begin to come to the laryngologist, and submit to treatment while the disease is still in its early stages.

Dr. RICARDO BOTEY (Barcelona) read a paper on the *Indications for Surgical Treatment in Tuberculosis of the Larynx, and what results might be expected from it*. He considered surgical treatment of the larynx contraindicated in the acute and subacute forms. Secondly, he also considered surgical treatment contraindicated where there was a general affection of the whole organ with infiltration and ulceration, and that whether there was progressive disease going on in the lungs or not. Thirdly, in possibly from fifteen to twenty per cent. of cases seen, surgical treatment was indicated where (a) we had lupus, a limited affection of the larynx with granulations, or (b) polypoid formation, (c) in unilateral infiltrations, or (d) where the disease was probably located at the entrance of the larynx, or it might even be where the third or half of the larynx was affected, unless the indications in a particular patient otherwise forbade it. Fourthly, he was not much in favour of scarification. Electrolysis he thought slow and unsatisfactory, while the galvano-cautery was the most useful in the case of lupus. Fifthly, the result of operative procedure depended largely upon a selection of the cases. Where this was done, in most instances they might obtain benefit, or at least amelioration, with prolongation of life and diminution of suffering. In a few cases—probably four or five per cent.—one might expect an absolute cure, lasting for a number of years. Dr. Botey regretted that he was unable (owing to having lost his valise) to show the forceps he had designed for carrying out these measures. The instruments were strong, and useful in removal of portions of the epiglottis, arytenoids, or the ary-epiglottidean folds. He founded his remarks upon a hundred cases in which he had operated for tuberculosis.

Dr. SCHEPPEGRELL (New Orleans, La.), after referring to the gravity of this affection, described a number of methods which have been advo-

cated for its alleviation and cure. He described Heryng's method of curettement and the application of lactic acid, and compared it with the galvano-cautery treatment, as advocated by Srebrny. The results in both are somewhat better than those which have been previously reported, but are still not very encouraging. The first method is liable to hæmorrhage, and the second to considerable reaction from the application. Both are difficult to apply, requiring considerable manipulative skill; and neither of them is applicable in all cases.

He then described the principle of cataphoresis and his method of applying it to the larynx. He had experimented with a number of substances—such as creosote, guaiacol, iodine, chloride of zinc, and the oxychloride of copper. Guaiacol is useful where the alleviation of pain is the principal object; the oxychloride of copper possesses marked microbicidal properties, and stimulates the tissues to a healthy reaction.

In applying cupric cataphoresis, he used spherical bulbs of pure copper, one-eighth to one-fourth inch in diameter, attached to an insulated handle. These bulbs, connected with the positive pole, are applied directly to the tissues, a current of one to three milliampères being used for three to ten minutes, the sitting being repeated every two to three days. A dispersing electrode, connected with the negative pole, is applied to the back of the neck. He had used copper needles for this purpose, but abandoned them for the copper bulbs. The copper in contact with the tissues is electrolyzed, and the oxychloride of copper which is produced passes into the tissues. Cocaine anæsthesia (five per cent. solution) is necessary in the majority of cases.

He then explained the great advantages of Kirstein's method of direct laryngoscopy in this method of treatment.

Dr. Scheppegeggell has found the following advantages from the application of cupric electrolysis in the treatment of laryngeal tuberculosis:

1. There is *no real destruction of the tissues*, and *no laceration of the surfaces* which might form a point of entrance for new pathogenic germs for reinfection, as is the case with the method of curettement, and, to a certain extent, also with the galvano-cautery and simple electrolysis. The cure is effected by the healthy reaction of the tissues, in the same manner as we often see specific lesions heal when the system is under the influence of mercurials.

2. In the cases which he had treated with this method there had been *absolutely no reaction or hæmorrhage* following the application—a point of great importance with tubercular patients.

3. The method does not demand the high degree of manipulative skill required for curettement and the electro-cautery in the larynx, and is especially simple when direct laryngoscopy can be used.

4. This method is applicable to *all cases* of laryngeal tuberculosis.

The clinical history of three cases in which this method was used with satisfaction was then given. In the first two cases the ulceration was cured and the infiltration diminished, when the treatment had to be discontinued on account of the aggravation of the pulmonary disease, to which the patients subsequently succumbed.

In the third case, in which no pulmonary disease could be detected,

but in which the bacilli of tuberculosis were found after repeated examination of the sputum, and in which the clinical signs of tubercular laryngitis were very marked, the patient had lost twenty-five pounds, was so weak that he could walk only when supported, and deglutition was so painful that he could swallow only with the greatest difficulty. There was no history of any specific affection. Antiphthisis had been used without effect. The arytenoid region was much infiltrated, with extensive ulceration of the interarytenoid fold extending to the left over the ventricular band. The epiglottis was covered with an ulceration of the left anterior process. The mucosa, infiltration, and ulceration presented a typical image of laryngeal tuberculosis.

The metaphoric treatment was at once commenced in this case—at first every three days, and afterwards twice weekly. Improvement was noted after the third application, and after the month the ulcerations had healed so far that the patient could swallow semi-solid food with but little pain. The case continued to improve, and eight weeks later was entirely cured, with the exception of a slight hoarseness due to injury of the vocal cords. Six months later the larynx showed no return of the laryngeal distast.

Prof. ANGEL GAVINO (Mexico) devoted his attention to the treatment of tuberculosis by means of scraping, creosote and peroxide of hydrogen, with the help of lumbation. He stated that naturally a disease which was so widespread stimulated the surgeon or physician to act promptly in order that the suffering of the patient might be relieved, but all methods, medical or surgical, at present recommended did not give the desired result. We cannot treat tubercle of the larynx by the radical means we may employ in other diseases, such as carcinoma. He referred to the rational methods of treatment founded upon antiseptics, but none would succeed without great perseverance. When ulcerations are present scraping (with a special spoon) enables us to get at the deeper seated lesions: and with the aid of cocaine the application of creosote, diluted with water acidulated with lactic acid to one per cent, and with one-thousandth of hydronaphthal, might be usefully employed. After a few minutes a strong application of peroxide of hydrogen, according to the toleration of the patient, should next be made. Scraping being somewhat difficult in the region of the epiglottis, and presenting some danger at the interior of the larynx, Dr. Gavino prefers to limit his treatment to the level of the ventricular bands. He instances cases in which tracheotomy or intubation has been of advantage in carrying out this treatment, and thinks that in grave cases tracheotomy enables one to act with a certain amount of liberty, which could not be taken without risk in these operations. He finds that injections of oil with creosote, iodiform, etc., have been of use in such cases.

Dr. LUDWIG NANNERY said that the application of powders and liquids to the upper respiratory passages by the old method (*i.e.*, the doctor applying them to the larynx himself, aided by the laryngoscope) was very inconvenient, because (1) the use of the laryngoscope was an inconvenience to both doctor and patient; (2) much of the medicament never reached the larynx if the patient happened to expire at the wrong

moment ; (3) the applications could seldom be made more than once a day. He had therefore introduced an instrument by means of which the patient could make the applications himself. It was simply a glass tube of about six millimètres interior diameter, about twenty to twenty-five centimètres long ; at one end a piece about one centimètre long was bent to an angle of 100 degrees, while at the other end a piece of about four centimètres was bent to an angle of 145 degrees. In using it the short bent piece was introduced into the mouth to the posterior pharyngeal wall, the long bent piece resting on a plate containing the powder, or in a wine-glass containing the liquid to be applied. The patient simply inspired, and the powder or liquid went straight into the larynx and trachea, leaving mouth and pharynx untouched. Thus the applications could be made as often as was thought necessary, and very good results were obtained.

Dr. WEIL (Vienna) was surprised that no one had mentioned the use of antipyrin, and spoke highly in favour of the same.

Dr. HEYMANN (Berlin) agreed that antipyrin was often of much use.

Dr. L. PRZEDBORSKI *on the Use of Phenol Sulfo-ricinicum in Tubercle of the Larynx and other Chronic Diseases of the Nose and Throat.*

He said—(1) Phenol sulfo-ricinicum cannot be considered a specific in tubercle of the larynx or a preventive of recurrence ; in spite of objections, the same may be said of lactic acid. Using it along with surgical treatment, the patient often finds decided improvement, and even temporary healing. (2) Phenol sulfo-ricinicum possesses some material advantages over lactic acid. Its application is more agreeable to the patient, it causes less pain, it makes the use of cocaine almost unnecessary ; still, as the author believes, the successful results from phenol are less durable than those from lactic acid. (3) As Heryng rightly states, phenol acts quickly in tubercular infiltration of the true vocal cords, the ary-epiglottic bands, the Santorini and arytenoid cartilages, and in destructive infiltration and ulceration of the interarytenoid spaces. Phenol sulfo-ricinicum is less successful in diffuse infiltration of the epiglottis, and least of all in diffuse infiltration of the false vocal cords. In these cases phenol, combined with local surgical treatment, gives much better results. (4) Phenol sulfo-ricinicum deserves much greater use as a symptomatic remedy ; even in the most doubtful cases it does not fail to lessen or alleviate pain.

Dr. Przedborski, in addition, made the following statements, which, although not bearing directly upon the question of tuberculosis, may be quoted :—

In painful dysphagia particularly it gives most successful results. (5) In rhinitis atrophica (six cases) phenol in twenty per cent. solution (painting every third day after thoroughly washing out and cleaning the nasal cavities) gave good temporary results ; the troublesome feeling of dryness in the throat disappeared, the penetrating smell was scarcely felt, the continued formation of crusts was reduced to a very small amount. In the hypertrophic form of nasal catarrh the author succeeded in two cases in destroying the thickening of the mucous membrane of the lower

turbinated bones by means of four applications of thirty per cent. solution of phenol. Also in three cases of lateral pharyngitis the swellings disappeared after repeated applications of the same solution.

Prof. CHIARI (Vienna) said that operative treatment of laryngeal tuberculosis always demanded extreme care in the selection of cases; unless this were exercised more harm than good was likely to be done. He always excluded from operation all cases of lupus, because the cicatrix following on the operation tended to shrink up, just as lupus cicatrices do in the skin, and so there was great danger of stenosis following.

The patient ought to be in fair condition as regards lungs and general health. There was no use operating on the larynx where the lungs were badly involved. Again, the case should not be one with a tendency to rapid breaking down of tuberculous infiltration; operation in such cases only did harm. On the other hand, severe dysphagia makes the operation not only justifiable but imperative, even in cases of extreme lung disease. We have no means that so rapidly cures the dysphagia, and thereby relieves the patient of the horrors of starvation. Even after the most complete and satisfactory operation he finds that the disease always returns, *i.e.*, he has never obtained a permanent local cure.

Electrolysis he considered slow and unsatisfactory; could say nothing as to total extirpation of the larynx for tuberculosis, as he had never carried it out. As for intubation, he had found the tube always acted as an irritant, therefore it should be avoided.

Dr. HAJEK (Vienna) insisted that at present we had absolutely no means of knowing whether a case was suited for operation or not, some of the apparently quite simple cases being unsuitable. For instance, given a case with a few slight granulations, easily accessible, the patient may not stand cocaine, but after the first or second application completely lose his appetite. In such a case we can cure the larynx (*e.g.*, get a cicatrix where a granulation had been), but we kill the patient. It is, therefore, absolutely necessary to watch a patient for weeks before deciding to operate; watch the temperature, watch the granulation or ulcer (as the case may be) to see whether it is progressing slowly or rapidly, and so try to form an opinion as to whether we can hope to do any good by operative interference. He had seen two cases in which he attributed the death of the patients to the effect of cocaine on their appetites. Again, we are often misled by appearances. It is always pleasing to the surgical eye to see a clean cicatrix in place of a breaking down infiltration or of an ulcer, but from the patient's point of view the benefit is often highly dubious. We do not know how long the patient might have lived if he had been left alone.

Dr. MOURE (Bordeaux) said we were apt to forget that we had to treat, not tuberculosis of the larynx, but patients suffering from that disease. Patients varied immensely in their constitution, both mental and physical; therefore, what suited one would harm another; therefore, very careful selection of cases was necessary. Curettage, or cutting with cutting forceps, might give good results in cases of circumscribed tubercular infiltrations, where the patients were otherwise in good condition, but where the tuberculosis was at all diffuse, only harm would be done by

operation ; frequently it would be followed by a sudden violent outbreak of tuberculosis. Therefore, extreme care was required in selection of cases.

*Œsophagoscopy and its Clinical Significance.*

Prof. VON HACKER (Innsbruck) read a paper in which he said a short survey of the historical phases through which œsophagoscopy has passed up to the present time will prove why the writer, from practical experience, considers œsophagoscopy on Mickuliez's principle the most suitable of the time. In this the reflected light from an incandescent lamp of simplified and improved form is used, and from which, also, Rosenheim's method of examination differs only slightly.

The most noteworthy abnormal results of the more important diseases of the œsophagus will be considered afterwards, under analysis of the appearance and physiological condition of the interior of the normal œsophagus—such as inflammatory processes, constrictions, dilatations, formations of diverticulæ, new growths, and foreign bodies. From these investigations we obtain the clinical significance of œsophagoscopy, which, first of all, is an aid to diagnosis, but besides that serves a therapeutic purpose, most particularly in the case of foreign bodies in the œsophagus.

The instrument was then shown and a practical demonstration of its application given.

**BELGIAN SOCIETY OF OTOTOLOGY AND LARYNGOLOGY.**

*Summer Meeting, Brussels, 1897.*

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Dr. BAYER, *President.*

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(Specially reported for the JOURNAL OF LARYNGOLOGY by Dr. HICQUET.)

MORNING SESSION.

*Presentation of Patients, Anatomical Specimens, and Instruments.*

M. CAPART (Brussels) showed a fragment of bone, measuring one by two centimètres, coughed up after a sojourn of some three years in the left bronchus.

M. EEMAN showed a patient operated upon four years ago for keratinizing carcinoma of the left vocal cord. A recurrent growth had developed in the skin wound. The speaker drew attention to the very slow development of the growth, the mechanism of malignant regeneration explaining itself in no other way.

M. EEMAN exhibited microscopical preparations of a sarcomatoid fibroma of the larynx. The growth showed numerous traces of inflammation, and was filled with young cellular elements, which created a suspicion of sarcoma. Definite cure had followed removal.

M. EEMAN also showed a temporal bone presenting an anomaly of the transverse sinus, which was situated immediately behind the meatus,

from which it was separated by a layer of bone two or three millimètres in thickness. In this case it would have been impossible to make an operation channel in antrectomy.

M. GORIS (Brussels) showed three patients cured of empyema of the maxillary sinus by a radical operation, described by the speaker at a previous meeting of the Society. He repeated his former conclusions, namely, that chronic Highmoritis required extensive curettage after removal of the anterior wall of the sinus, and that the disease required prolonged post-operative treatment.

M. GORIS reported two cases of sinusitis frontalis operated upon by himself, with the object of demonstrating the necessity of opening through the anterior wall, by which means alone is access to the cavity obtained with certainty; and also to emphasize the danger of delaying operation until the patient is already suffering with cerebral infection.

M. GORIS showed two patients who had undergone thyrotomy for early tubercular laryngitis. One case was that of a girl of twenty, presenting a small ulceration in the left arytenoid region. During the operation six small tubercles were discovered on the inferior face of the left vocal cord. (Curettage, thermo-cauterization.)

The second case was that of a young man of twenty-six, with long-standing unilateral chondritis. In both cases the results were good: in the first instance the voice remained clear; in the second the voice continued hoarse, as it was before the operation.

The second patient put on nine pounds in two months. The cicatrix, in a short time, showed signs of tuberculosis, and was, in part, removed. The second cicatrix is sound. The speaker mentioned a third case operated upon by him, relating to a tuberculous subject with marked disease of the lung—a condition absent in the preceding cases. Result encouraging.

M. HICQUET (Brussels) showed two cases of lupus of the nose, which had been modified for the better, and in a very distinct manner, by the cathodal rays. Under the influence of this treatment ulceration had healed and re-formation of tissue had taken place.

One case had been submitted to twenty-nine and the other to ninety exposures of nine minutes' duration. The results, altogether, were very encouraging. Tuberculosis of the larynx and ozæna were not benefited by this method of treatment.

M. ROQUET (Lille) showed a hæmorrhagic polyp of the nasal septum.

M. ROUSSEAUX (Brussels) showed a metal terminal, designed to facilitate catheterization. This terminal, fixed to the free end of the tube attached to the bellows, is provided with a catch which runs in a groove on the catheter, and so firmly unites the two instruments.

M. SCHLEICHER (Anvers) showed an appliance for use in rarefying and condensing the air in the meatus. The end of the tube is attached to the air reservoir, while the other end is covered with a small, thin rubber disc—a kind of artificial membrana tympani—which indicates if the massage is being carried out effectually.

M. GELLÉ (Paris) has modified the masseur so that, when in place, the first movement produced is one of aspiration.

*The Treatment of Ozæna by Cupric Electrolysis.* (The report of a commission appointed by the Society to examine this treatment.)

M. HENNEBERT:—Gentlemen,—At the sixth meeting of the Otologists and Laryngologists of Belgium, held at Brussels on the 16th of June, 1897, Dr. Cheval read a communication dealing with the treatment of ozæna by interstitial electrolysis, in which he stated that he had obtained ninety-one per cent. of cures, and that seventy out of ninety cases had been cured after one sitting. These cures had been obtained by electrolysis alone and without injections. At the last meeting of the Society, a commission was appointed, consisting of MM. Eeman, Schleicher, Goris, Buys, and Hennebert, to examine into the action of cupric electrolysis in ozæna. We are present here to report the results of our research, which are as follows :—

Seven patients suffering with typical ozæna have been treated by M. Cheval himself with cupric electrolysis.

Of the seven—one has been lost sight of; one has submitted to a single electrolysis on one side; three have submitted to a single electrolysis on both sides; one has had one electrolysis on one side and two on the other; one has had two on each side.

The patients have been forbidden to use nose washes.

The sittings have taken place at intervals of from six to eight weeks. Among the six cases under consideration, we have seen not a single instance of cure. In one case the patient noticed benefit of a subjective character, and declared that the crusts came away more easily. In no case have we observed any benefit or appreciable objective change. Two of the patients have of their own accord gone back to syringing, in spite of orders to the contrary. In these cases, as well as the others, all change in the nose is absent.

The report was followed by a lively discussion, in which M. Cheval and the committeemen, as well as several of the members of the Society, took part.

M. CHEVAL stated that the cases of ozæna presented to him for trial were of exceptional severity, and, moreover, reproached the members of the commission for having failed to be present at all the electrolysis sittings; and, finally, he was surprised that the evidences of improvement observed by him had completely escaped their notice. He would add that he was not singular in obtaining cures by cupric electrolysis, but that MM. Capart, Bayer, Rommeau, and Wodon at home, Moure, Moritz Schmidt, and Garel abroad, had demonstrated the efficacy of the method.

In reply it was said that the commission was not appointed to decide as to whether or not ozæna in general could be cured by cupric electrolysis. A certain number of ozæna cases had been taken at random and transferred to M. Cheval for treatment at his own hands. After this the commission had made a second examination and found the patients neither cured nor benefited. This result was transmitted to the Society. The matter was one of simple statement of fact.

M. Cheval refused to continue the experiments.

*Acquired Syphilis of the Ear.*

M. HENNEBERT. Conclusions: These affections are rare, but evidence is forthcoming to show that they are less uncommon than is generally supposed.

1. In a large number of cases constitutional syphilis is not diagnosed.
2. Many lesions of the external ear, in all respects similar to cutaneous manifestations in other parts of the body, escape examination by aurists.
3. A large number of aural affections of syphilitic origin have their etiology ignored by reason both of the limitations of our actual methods and of the absence of typical clinical symptoms which permit of the diagnosis of a specific cause.

*External Ear.* Chancre of the auricle is extremely rare (four cases known). Condylomata of the meatus seem to be the most frequent manifestation in the external ear; possibly they take part in the formation of certain congenital deformities of the auditory canal (hereditary syphilis with intrauterine course).

*Middle Ear.* In the great majority of cases, lesions of the tympanum are dependent on disease of neighbouring organs (nose, pharynx, etc.), and consist as a rule of catarrhal manifestations of varying intensity with the nature and course of the causal lesion.

*Internal Ear.* Two forms of specific disease of the labyrinth must be distinguished. (1) The slow chronic form. (2) The acute apoplectic variety. Both forms have symptoms in common, which are identical with those of all labyrinthine affections; they differ from one another in that the acute variety is accompanied by vertigo and various disturbances of equilibrium, associated with nausea and vomiting.

In the chronic slow form, destruction of the peripheral organs of equilibrium takes place gradually, without evoking reflexes, and is accompanied by a compensatory functional development of sight, tactile, and muscle sense. The Brach-Romberg sign alone reveals the ampullary lesion.

In the apoplectic variety, this compensation has no time to develop, disturbance of equilibrium is marked, while nausea and vomiting indicate that the irritation spreads from the auditory nuclei to the neighbouring glosso-pharyngeal and vagal nuclei.

Finally, deafness and disturbance of equilibrium coming on during the course of syphilis, may form part of a complex of symptoms due to a lesion situated outside of the internal ear; for instance, in the internal auditory canal, at the base of the skull, or in some part of the brain.

The pathological anatomy of aural syphilis has as yet scarcely been studied. Syphilis can set up a process of sclerosing osteitis around the antrum. (Specimen shown.)

M. BROECKAERT. *Hereditary Syphilis.*

Syphilitic ear troubles, due to hereditary influence, may be developed at any age, though we have no unequivocal evidence of hereditary syphilis becoming manifest in adult life or old age. Early hereditary syphilis produces, more often than is generally admitted, various specific lesions of the ear.

Certain forms of syphilide appear on the external ear, and are often characterized by a marked tendency to ulceration. In the middle ear they produce divers symptomatic affections, and certain direct or indirect complications of disease in the neighbourhood. Among the latter, middle ear suppuration should have special characters, a matter, however, which is far from being proved.

With regard to dry otitis, one must consider it, with Gradenigo, as a parasyphilitic affection; that is to say, specific in origin, but not in character. Hereditary syphilitic deafness is generally due to labyrinthine disease, of which the pathology is obscure. It may come on in early infancy, but usually does so about puberty. It should be considered as one of the etiological factors in cases of congenital deaf-mutism, classed as consanguineous or hereditary. The prognosis of congenital syphilitic deafness is very grave, since the defect is usually permanent. On the other hand it is certain that energetic treatment, undertaken when the lesions are relatively recent, may not only arrest the course of the malady, but even establish complete cure. The best results have been obtained with hypodermic injection of pilocarpin.

*The Early Symptoms of Laryngeal Tuberculosis.*

MM. CHEVAL and ROUSSEAU. Conclusions :

1. Laryngeal tuberculosis is primary and secondary—*i.e.*, consecutive to pulmonary phthisis.

2. The premonitory stage, sometimes of many years' duration, takes two forms :

(a) The catarrhal form. These are cases of laryngitis which resist treatment, which are seldom generalized, and which are usually localized to one vocal cord. It is an error to suppose that this form may lead to primary laryngeal tuberculosis.

(b) The anæmic form. Anæmia of the larynx and pathognomonic anæmia of the velum in subjects who are not always anæmic or chlorotic. This variety is complicated with aphonia, intermittent and more or less persistent, with respiratory troubles. Is pulmonary disease always present? Auscultation and percussion cannot as yet answer this question with certainty in many cases.

3. Microscopic examination of the sputa makes early diagnosis possible, but this does not show if the disease is primary or secondary.

4. *Post-mortem*.—We have never met with an instance of primary laryngeal tubercle. Lesions take two forms :

(a) Granular infiltration. Small granulations of greyish aspect are found in some part of the larynx. The infiltration is often quite superficial, and is rarely more than one millimètre in depth. It is accompanied by congestion and œdema. Later, these granulations undergo caseous degeneration, and a large number of minute erosions result, which, running together, produce ulceration.

(b) When of recent development the ulcer is shallow and superficial, the edges are jagged, and the base is grey and fairly smooth. On the other hand, old ulcers are broken up, very irregular, and studded with hollows, actual small cavities, around which the tissues are sclerosed.

These ulcers are covered with pus. Other lesions, such as caries, necrosis, and loss of cartilage, are not found at this stage.

5. No relation exists between the degree of the laryngeal and pulmonary lesions; thus we have seen extensive pulmonary excavation on both sides and the larynx free from disease, or but slightly infiltrated.

6. We have not found any preference for particular parts of the larynx. We have found the lesions in all parts, but we wish to determine by an extensive series of observations if they are not more frequent on the right side. In sleep the right side is generally lower, and consequently more exposed to pulmonary secretions.

7. The side of the larynx most affected does not correspond to that of most diseased lung. Even crossed lesions have been met with.

8. General treatment is imperative, as at all stages.

9. The mountain-air cure is the best treatment.

10. Local surgical treatment gives good results. This should be a thorough curettement, followed by cauterization with lactic acid, *per vias naturales*. In some cases where the laryngoscope does not give precise information as to the position and extent of the lesion (*e.g.*, subglottic infiltration), thyrotomy, followed by curettement, may find its uses.

#### *Recurrent Paralysis.*

M. BROECKAERT has undertaken a fresh series of experiments, in order to determine the causation of the median position of the cord in partial recurrent paralysis. He has not found more distinct evidences of degeneration in the abductor than in the adductor muscles, in dogs two months after resection of the nerve. He has failed to demonstrate the existence of centripetal fibres in the nerve.

#### M. COOSEMANS. *Holoraine in Oto-Laryngology.*

The speaker warmly recommended this new drug, which can be used as a local anæsthetic in one per cent. solutions. It has the advantage over cocaine of being non-toxic, in producing no vaso-constriction, and in causing less irritation when first applied. Moreover, it is cheaper, and solutions are not decomposed by keeping.

#### *A Case of Bezold's Mastoiditis.*

M. DÉLIE described an acute case of this disease, with necrosis of the apex of the apophysis. Rapid cure followed free opening by the ordinary method.

#### *A Case of Hysterical Deafness without other Manifestation of Hysteria.*

M. EEMAN agreed with Gradenigo in thinking hysterical deafness more common than was generally supposed. He described in detail a case recently under his observation. The patient had suddenly become almost totally deaf, after a violent emotion provoked by an auditory impression, without any of the phenomena which usually accompany a lesion of the hearing organ (tinnitus, vertigo, etc.). The deafness rapidly became total for all sounds. The patient presented numerous areas of cutaneous anæsthesia and of extreme hyperæsthesia, with marked diminution of the visual field. No anatomical change present. The deafness yielded to psychical treatment.

*Twelve Cases of Rhinitis Pseudo-Membranosa Diphtheritica.*

M. EEMAN recalled the fact that at the last annual meeting he had maintained the theory of unity of pseudo-membranous rhinitis. He believed that this affection was always due to Loeffler's bacillus, and he proved it by a series of observations tested by bacteriological methods. He reported twelve cases of obvious diphtheritic rhinitis.

M. BAYER had seen similar cases.

M. BUYS had, during two years, found the bacillus in five out of six false membranes examined. The negative result in one case might be put down to faulty technique. He had not seen contagion.

M. LUBET-BARBON thought it would be interesting to know if this form was contagious.

M. EEMAN said that an observation of Dr. Gavaert showed it to be so.

M. CHEVAL had also seen a case.

*A Case of Naso-Pharyngeal Fibroma in an Old Woman: Treatment by Curettage of the Naso-Pharynx. Cure.*

M. GAUDIER. The fibroma showed several centres of sarcomatous degeneration (examined by the author). It was of the size of a mandarin orange and filled the naso-pharynx in a woman of sixty. There was a history of at least twenty years. The author removed it, under an anæsthetic, with an adenoid curette of Lermoyez's pattern, but of very large size. Hæmorrhage was insignificant, owing, probably, to depth of the curettement, which reached the periosteum. The operation lasted less than a minute. No recurrence after two months.

M. NOQUET said that the case was interesting, as showing the inexactitude of the belief that naso-pharyngeal tumours disappeared after the age of twenty-five.

*Case of Lupus of the Larynx. Surgical Treatment. Cure.*

M. GOUGUENHEIM had practised deep curettage in a case of secondary lupus of the larynx. This proceeding was followed by thorough actual cauterization. No recurrence after six months.

*Vacuolated Tympanic Membrane.*

M. HENNEBERT drew attention to a special appearance presented by the drumhead in some cases of sclerosis. The appearance was that of drops of fluid, strongly refracting light, but not appreciably standing out from the surface of the membrane. Their existence was an unfavourable diagnostic sign.

*Acute Empyema of the Mastoid Antrum; Extradural Abscess; Trepanation of the Mastoid and Cranium; Cure.*

M. HENNEBERT, in describing this case operated upon by him, found an opportunity of making several interesting observations. To begin with, the cause of the trouble was to be found in a syphilitic nasal lesion of long standing; in the second place pyrexia was absent; finally, the membrane was restored to integrity in spite of prolonged suppuration.

*The Use of Bromide of Ethyl.*

M. JACQUET made use of this anæsthetic in operations of short duration in children. The trismus which occurred when administration was unduly prolonged was not a formidable accident, as a delay of a few moments sufficed for its disappearance. Only impure samples gave disappointing results.

*A Case of Fracture of the Styloid Process.*

M. VAN DOORSLAER. The fracture, which occurred near the extremity, simulated the presence of a foreign body under the mucous membrane of the left wall of the pharynx. *Waggett (Trans.).*

## AUSTRIAN OTOLOGICAL SOCIETY.

*Second Annual Meeting of Austrian Otologists, Vienna, June 27th and 28th, 1897.*

(“Monatschrift für Ohrenheilkunde,” July, 1897.)

(Translated and abridged by Dr. DUNDAS GRANT.)

*President*—Prof. ADAM POLITZER.

Dr. GUSTAVE ALEXANDER. *On the Anatomy and Development of the Lower Part of the Mammalian Labyrinth.*

The canalis reuniens is generally described as the canal of junction between the sacculæ and cochlear duct; the vestibular cæcum is the vestibule end of the cochlear duct as opposed to the cupola end, which is sometimes called the “cupola cæcum.” From the study of the development of the parts in the guinea-pig, and in a large number of developed mammals, the writer has come to the following conclusions:—

The canalis reuniens develops at the same time as the sacculæ and cochlear duct, from an indifferent stage of the pars inferior. Its development is to be traced back to a period at which it is not yet narrowed as compared with the sacculæ and cochlear duct.

The macular area of the pars inferior is at first connected with the pars superior and extends into the cochlear duct, but very soon the area separates from the smaller portion of the pars superior, so that the papillary area of the cochlea is quite apart from the macular area in the sacculæ and the ductus reuniens. The macular area of the canalis reuniens is in connection with that of the sacculæ, and at first it develops in an analogous manner to that, and later undergoes atrophy.

In the fully developed individual we find in its place in the canalis reuniens simply a streak of cochlear epithelium, which extends upwards to the peripheral nuclear layer of the macula of the sacculæ.

The writer was of the opinion that in the canalis reuniens of mammals there was the remnant of the section of the labyrinth which was, perhaps, fully developed in fish, but this part of the question required further investigation.

The cæcum developed at a period at which the canalis reuniens was

already present, and at first it appeared as a shallow depression in the long axis of the canalis reuniens. The axis of this depression extended further and further into the course of the ductus cochlearis. The walls of this depression consisted at first of a simple layer of cubical cells. Later, certain parts of the canal of the cochlea grew towards and into the cæcum; from the connective tissues of the duct the stria vascularis extended into the floor of the cæcum and ligamentum spirali, serving as basis for the cæcum and over it towards the vestibule. From the epithelium elements of the cochlear duct a small streak extended for some distance into the cæcum in connection with the papilla. The larger portion of the cæcum is devoid of papillary elements. The cæcum of the vestibule is characterized by the absence of the scala tympani, of Corti's membrane, of nerve fibres, and of cochlear nerve epithelium in the strict sense.

Thus the parts named are found to come to a sudden stop at a certain portion of the ductus cochlearis, where a sharp line can then be drawn between the cochlear duct and the cæcum. The canalis reuniens has nothing to do with the local limitation of the cæcum; the region of entrance of the canal into the cochlear duct belongs only in a very small part to the ductus cochlearis, but in its largest part to the cæcum of the vestibule. (The paper is to be published in full in the "*Monatschrift*." )

Prof. GRUBER stated that at the last meeting of scientists in Berlin he had drawn attention to, and had published in the second edition of his work on "*Diseases of the Ear*," the description of the opening in the lower wall of the vestibule, in which the cæcum of the cochlear duct was to be found. He then showed that a bristle can be passed from the niche of the round window into the vestibule.

Dr. PANZER. *On Radical Operations in Childhood.*

As aurist to the St. Anne's Hospital for Children, he had had within the last six months the opportunity of carrying out a large number of radical operations for caries of the temporal bone. In chronic cases he practised the typical radical operation devised by Kuster, Bergmann, Stacke; and in the acute ones he held that there was no fixed rule, but the operator had to be guided by what he found at the time.

In regard to the plastic proceedings on the meatus, he found it best in children to cut away the superior posterior wall of the membrano-cartilaginous meatus, and found no disadvantage from this as regards either delay in healing or necrosis of the exposed bone.

Out of his eighteen cases he had ten of acute caries, and eight of chronic suppuration, cholesteatoma, etc. The constitutional disturbances were much greater in the acute than in the chronic cases.

Caries extended in some cases to the mastoid, and in others to the tegmen tympani, the anterior wall of the meatus and the middle wall of the tympanum, or extended beyond the limits of the tympanic cavity, and gave rise to subdural abscess. The ossicles were, again, in the acute cases generally carious, but in some quite healthy, and simply embedded in masses of granulations. In seven other cases there was complete recovery—that is to say, no trace of pus remaining in the cavity, which was lined by a firm, shining cicatrix. Two children died; one of measles

two months after the operation, one of tuberculosis; two were removed from treatment, so that the ultimate result could not be ascertained; seven still remain in various stages of after-treatment.

The age of the children operated on varied from six months to twelve years. In every case there was a striking improvement of the general condition, and fever, pain, sleeplessness, and loss of appetite disappeared within a few days after the operation. There was a considerable amount of hearing power remaining in the case which recovered, so that whispered speech could be heard at a distance of several steps. The after-treatment consisted in plugging the cavity of the wound<sup>1</sup> two or three times a week with iodoform gauze, and cauterizing with chromic acid any granulations which shot up in the course of treatment. In all cases an endeavour was made to close the fistula behind the ear, and in two it was necessary to vivify the edges and introduce sutures.

Prof. GRUBER pointed out that statistics showed that in the earlier years of life suppurative otitis was not nearly so dangerous as later on. It was most dangerous between the ages of puberty and fifty years. In childhood the elements of the temporal bone were still loosely joined together, and inflammation extended more easily outwards than inwards; the separation of the necrosed parts took place more easily, so that removal could be effected without difficulty and with less danger. In the treatment of children he was slow to recommend operation, and in most cases he obtained the most satisfactory results from conservative treatment.

Dr. KAUFMANN missed in Dr. Panzer's account any distinction between the cases of chronic suppuration of the middle ear and the same when they occurred in scrofulo-tuberculous children. In the first class of cases the indications for carrying out the operation are clear and the results unquestionably satisfactory. Operation on undoubtedly scrofulous or tuberculous children had given Dr. Kaufmann no very gratifying results. He reminded those present of the discussion which had taken place twenty years before in general surgery on a question of conservative or operative treatment in diseases of the joints. On the one hand we sometimes see most striking benefit from conservative treatment with attention to hygiene and dietetic regulations in scrofulous children, so that operation is not called for; on the other hand, operation is sometimes followed by a long, wearisome period of after-treatment of the wound—sometimes even very rapid and extensive necrosis of the bone—so that the results turn out to be no better than those obtained by conservative treatment.

Dr. GOMPERTZ remarked that Dr. Panzer's removal of the inner extremity of the Stacke flap was a return to Zaufal's old method, and it was a question as to whether a return to this method was not the most satisfactory.

Dr. Gompertz advised that in chronic cases we should not hesitate too long before operating. Probably those cases of Kaufmann in which healing was very slow, would have ended fatally if operation had not

<sup>1</sup> By an unhappy misprint in the German paper, "Mundhöhle" appears instead of "Wundhöhle."

been carried out. The necessity for operation for chronic suppuration was greater in children than in adults, because it was difficult or impossible to carry out the necessary conservative measures thoroughly in children.

Prof. URBANTSCHITSCH removed the posterior part of the meatus when the skin was diseased; otherwise, he preferred to retain the flap, in the belief that a more speedy epidermization was thereby brought about.

Dr. PANZER, in reply, stated that he had found no evil result from the removal of the posterior wall; on the contrary, the opportunity for stenosis to take place was removed. As regards the question raised by Dr. Kaufmann as to operation upon scrofulous children, he held that delay was much more serious and dangerous in caries of the temporal bone, close to the membranes of the brain, than it was in disease of a joint—such as the knee. He differed from Prof. Politzer, holding that the radical operation for acute caries was more difficult in children, because there was no typical mode of operation, but every case was different. He agreed with Prof. Gruber that the plastic proceedings were of less importance in children, because the meatus was still incompletely formed and epidermization was more easily brought about.

Dr. SPIRA (Crakow). *A Few Words on the Conservative Treatment of Chronic Otorrhœa.*

Dr. SPIRA protested against the too great readiness to perform radical operations, which, especially in public practice, threatened to degenerate into polypragmatical excess of zeal. In view of the difficulty of deciding as to whether recovery was possible without operation, he considered it the duty of the practitioner to leave nothing untried before resorting to the knife, as long as there is no immediate danger.

He spoke highly of xeroform as an insufflation affecting the secretion favourably, and never causing retention of pus. When powders were contraindicated, he advised introducing liquids into the ear and driving them into the interstices of the tympanum by means of pressure on the tragus, while the Eustachian tube is occluded by a thick solid bougie introduced through the nose.

Prof. URBANTSCHITSCH had used xeroform, but did not find its effect remarkable. He much preferred airol.

Dr. GOMPERTZ objected to the use of insoluble powders in cases of cholesteatomatous or purulent collections in the attic or antrum. In suppuration in the lower part of the tympanum, cleansing was the chief agent, and it mattered little what material was used for insufflation.

Dr. FALTA insisted on conservative treatment in all possible cases. In attic suppuration with large enough perforation, he used small tampons of gauze, and recommended Haug's chinolin-naphthol gauze.

Prof. URBANTSCHITSCH. *On Vertigo and Apparent Movement.*

Patients were placed in front of a board on which was a circle with the vertical and horizontal diameters in black, various other diameters at intervals of about two degrees being painted in different colours. During syringing the ear, blowing air into the meatus, condensing and rarefying

the air in the outer ear, apparent changes in the position of the painted diameters took place, radii appearing to be vertical which were really inclined at angles of from two degrees to four degrees, and even as much as ten degrees. In some cases radii appeared to close up together like a fan, and in a few cases no movement was perceived.

Numerous variations occurred, sometimes under binocular vision, sometimes under monocular, and with the ear of one side and with the eye of the other. The time required from the beginning of the experiment for the phenomena to occur varied. In some it was immediate, in others after some few minutes, and sometimes quicker for one eye than the other. Similarly the duration of the phenomena varied. Occasionally the movements were absent for binocular vision, while in the same person there was an inclination towards the right for one eye and towards the left for the other. Complete correction sometimes took place, and at other times incomplete, the latter causing the appearance of double images.

The following case may be quoted :—In place of the single vertical cross, there appeared two crosses leaning to the right for one eye, and to the left for the other ; while with binocular vision, there were three crosses, one inclined to the right, one to the left, and a vertical one in the middle. By the use of tones a complicated series of phenomena could be produced, sometimes with high tones, and then, again, only with lower tones : once only the twice stroked C, at another time some other definite tone which gave rise to the inclination towards the right or the left, or forced movements forwards, backwards, or sideways. This occurred in the perpendicular attitude with closed or open eyes. At one time the stimulus was the starting of the sound, and another time its cessation. I could repeatedly increase or correct, by the sound of a tuning-fork of definite pitch, the deviation brought about by syringing.

In another series of experiments  $c^1$  and all the tones above it as far as  $c^2$  brought about isolated fan movements, and tones higher than this produced wave-like movements of the radii. If a tone after the other from  $c^1$  to  $c^2$  was sounded, the fan movement was maintained during still higher tones, and it was not till then that the wave movements set in. Conversely, I begin with tones between  $c^2$  and  $c^3$ , and thereby bring about wave movements.

If, however, I select deeper tones, then the wave movements only come on under the stimulus of tones which by themselves would give rise to fan movements. It is similar to phenomena that can be observed in persons having a gap in their tone scale, as in some deaf mutes. In these, by gradually going up in the scale, tones which otherwise escaped perception became perceived. If, on the other hand, tones from the region of the gap are selected, and we go gradually upwards or downwards in the scale, tones which otherwise would have been heard, escaped perception.

The influence of sounds in producing apparent movements was further varied by the application of glass of different colours ; for instance, while the tone was being produced in the neighbourhood of one ear, the coloured glass was held before the eye of the same or opposite side, or

before both eyes, at the same time. A combination of certain colours and tones produced in the same individual apparent movements and disturbances of equilibrium of a different character, and I was able to increase, or correct, or even over-correct, the movement produced by syringing.

In carrying out these experiments great care was taken to avoid putting leading questions, and the results were found to be remarkably constant.

Dr. POLLAK thought the results might be explained by the observations made by Mach, Goltz, and Breuer upon the function of the semi-circular canals. The stimuli affecting the cochlear apparatus were easily transmitted to the vestibular. Irritations of the semicircular canals give rise, as Högyes had shown, to contractions of definite groups of muscles of the eyes, which, even though very slight, are sufficient to cause the subject to see the perpendicular line as if it were inclined to one side or the other.

Dr. HAMMERSCHLAG pointed out that the maintenance of equilibrium was a very complicated function in which various senses—sight, hearing, touch, and muscular sense—took part. It could hence be understood how a disturbance in the sphere of one of these senses could bring about an influence on this complicated function.

Dr. SPIRA thought he saw in these movements something analogous to the disturbance in the organ of sight in affections of accommodation. In myopia and presbyopia and accommodation for the fixation of near points, apparently movements of the surrounding objects and alterations of letters were known to occur. In a similar way he had attributed the described phenomena to disturbances of accommodation in the auditory apparatus.

Prof. GRUBER. *On the Study of Intracranial Attic Diseases.*

The author, in continuation of the subject which he had treated in the otological meeting of the previous year, mentioned the statistics derived from forty thousand and seventy-three *post-mortem* examinations made in the General Hospital of Vienna from January 1st, 1873, to December 31st, 1894. He was anxious to find out what changes had taken place in the mortality in recent times as compared with the former, in which the surgery of the ear was less actively practised.

| Autopsies in the Periods.         |        |       | Intracranial Diseases. |       | Percentage. |
|-----------------------------------|--------|-------|------------------------|-------|-------------|
| Jan. 1, 1873, to Jan. 1, 1883 ... | 17,941 | ..... | 88                     | ..... | 0.49        |
| „ 1883, „ „ 1888 ...              | 8,770  | ..... | 52                     | ..... | 0.59        |
| „ 1888, „ „ 1890 ...              | 3,960  | ..... | 26                     | ..... | 0.65        |
| „ 1890, „ „ 1892 ...              | 3,683  | ..... | 28                     | ..... | 0.76        |
| „ 1892, „ Dec. 1, 1894 ...        | 5,719  | ..... | 38                     | ..... | 0.66        |

At first sight this table gave no very favourable result, but it must be kept in mind that in earlier years chronic inflammations, especially those associated with caries and necrosis of the temporal bone, were only rarely taken into hospital for long treatment, as it was thought that they could be more advantageously treated in the country under favourable home conditions. Within the last ten years, on the contrary, few, except cases

requiring operations, were taken into the hospital wards ; hence it will be seen that with the development of operative otology the relations in this respect have improved.

Prof. GOMPERTZ. *Osteoporosis of the Auditory Ossicles.*

The writer presented two temporal bones from a female, aged fifty-nine, who had died from marasmus, and who had been quite deaf of the right ear and dull of hearing in the left. He had not had the opportunity of examining her during life. The bones exhibited osteoporosis in a high degree, as could be seen upon the most superficial inspection. The greatest interest attached to the condition of the auditory ossicles and the capsule of the labyrinth. In the right temporal bone the osseous substance was highly rarefied ; in the left was seen, on the posterior wall of the external meatus, three depressions of a size to hold a hemp seed. The tegmen tympani contained extensive air cells, and the handle of the malleus was attached to the inner wall of the tympanum, as also was the long process of the incus by means of connective tissue. The head of the malleus and the body of the incus were ankylosed to each other, and on the inner surface of the incus was an osseous new growth, half the size of a hemp seed and hemispherical in shape. The long process of the incus was attached to the membrana tympani and to the posterior wall of the tympanum by means of firm osseous tissue. The ossicles of the right ear presented, on microscopical section, every evidence of osteoporosis.

Dr. GOMPERTZ referred to a case which he had described, the rarefying and condensing osteitis of the tegmen tympani resulting from chronic suppuration of the middle ear, and he looked upon the growth of new bone accompanying the breaking down of the normal bone as an important protection against the further extension of the inflammation.

Dr. GOMPERTZ. *Case of Postero-Superior Bulging of the Tympanic Membrane from Valvular Action of the Eustachian Tube.*

The patient was exhibited, the left membrane being the most typical. It was of normal colour, somewhat atrophied, convex in its superior half, especially the postero-superior segment. There was a bright light reflex running backwards from the short process. The bulging portion was sharply defined from the lower half of the membrane. The hearing distance was normal, and the Eustachian tube quite free. From former experience Dr. Gompertz recognized the case as one of valve-action of the tube, by which air entered into the tympanum more easily than it escaped, a condition he had always found to be due to a nasal lesion. He found hypertrophy of the posterior ends of both inferior turbinated bodies, a crest on the right side of the septum, and a circumscribed hypertrophy of the anterior extremity of the left inferior turbinated body.

Prof. A. POLITZER. *Contributions to the Pathological Anatomy of the External Attic.*

This was a continuation of the demonstration of preparations which had been commenced at the International Otological and Laryngological

Congress in Paris, 1889, and continued at the tenth meeting of the South German and Swiss Otologists at Nuremberg, 1890.

In regard to the normal anatomical relations of the external attic, he was convinced that, in spite of the exhaustive works of Kretschmann, Chatellier, Zuckerkandl and himself, the anatomy of the external section of the attic required still further investigation. It was very difficult to construct a normal picture on account of the numerous varieties in the folds of mucous membrane bounding the attic and dividing it up. He would direct attention only to the more constantly found ligaments and folds.

In the new-born subject the attic is partially or completely filled with the embryonic mucous cushion. Between the membrane of Shrapnell and the neck of the malleus there is only a small cavity, which is invisible except with the help of a lens, and this constitutes the first rudiment of Prussak's space. On frontal section the attic is often found full of embryonic jelly, while the middle and lower parts of the tympanic cavity are free. The various ligaments, folds, and pediculated bodies found in the adult in the attic and Prussak's space, are residua of this mucous cushion. Attention was again directed to the slit filled with connective tissue and blood vessels, which was first described by the writer as extending from the outer wall of the attic to the upper wall of the meatus, and which he had designated "the attic slit." This is sometimes the foundation of a fistulous canal. Both the membrane of Shrapnell and the external ligament of the malleus may be inserted together into the margo tympanicus, or they may be reduced to the form of a single membrane before their insertion. Prof. Politzer, in several cases, found the external ligament of the malleus divided into two distinct bands of fibres, of which the upper extended into the attic slit, while the lower one reached the margo tympanicus.

In order to distinguish the points of communication between the attic and the lower part of the tympanum, Prof. Politzer removed the petrous bone and exposed the inner surface of the membrane; then punctured the membrane of Shrapnell from the external meatus by means of a paracentesis needle and filled the external meatus with mercury. The metal flowed through the perforation to the inner surface of the membrane, most frequently above the posterior tympanic fold—in a few cases through an opening on the prominence of the posterior pocket, and once in the anterior section of the attic in front of the head of the malleus.

Prof. Politzer presented a series of illustrations of the changes observed in the outer attic during the last four years. Among the most important were the new connective-tissue growths, developing sometimes in the upper part of the attic, sometimes most marked in Prussak's space as the result of chronic catarrh of the middle ear, and leading to partial or complete obliteration of these spaces. Of particular interest is the comparatively large number of preparations showing adhesion of the membrane of Shrapnell to the neck of the malleus, with partial or complete obliteration of Prussak's space; these conditions could be recognized during life.

Acute processes in the tympanum give rise to the secretion of fibrinous or purulent exudations in the cavity of the external attic. *Acute suppurative inflammation* of this space, which is neglected by many observers, was noted in a few cases by the writer and illustrated in his drawings. *Chronic inflammations* of the external attic, with perforation of the membrane of Shrapnell, led, by round-cell development in the mucous membrane, to hyperplasia, narrowing, and partial *obliteration of the attic space* (four preparations), and the formation of granulations and polypi, which push through Shrapnell's membrane into the outer meatus. These may attain such a size as to resemble meatal polypi, their seat of origin in Prussak's space being only recognized after their removal. There were several preparations of cholesteatoma in the external attic, which, without doubt, were, in the majority of cases, of the nature of "invasion" cholesteatoma. They often remain confined to the external attic, but not unfrequently they push their way into the mastoid antrum, filling up and distending this cavity. In the latter cases they often give rise to vertigo and headache, calling for operative opening of the cavities of the middle ear.

Lastly, there was a series of preparations, with carious breaking down of the margo tympanicus, giving rise to gaps in the outer wall of the attic, through which the bodies of the malleus and incus were visible ; or, if these had broken down, a part of the superior portion of the tympanic cavity, and even (as Gruber has pointed out) the mastoid antrum.

In regard to treatment, the conservative methods, in the form of antiseptic irrigation by means of curved canulæ (Hartmann), with subsequent injections of alcohol solutions of boric acid, carbolic acid, corrosive sublimate, peroxide of hydrogen (Pollak) into the attic, and, further, the insufflation of antiseptic powders (Gompertz), give very good results in many cases as far as the subsidence of the suppuration was concerned. Often, however, the most careful antiseptic treatment remains without result for a long time. A frequent cause of persistence of attic suppuration is caries of the margo tympanicus, the diagnosis of which can be made out by means of probing with delicate, blunt silver probes. Prof. Politzer had within the last few years obtained cures in a large series of cases of chronic attic suppuration by repeated curetting of the rough margo tympanicus by means of small sharp spoons, and he recommends this treatment even where no roughness can be detected. The immediate effect of this treatment is to enlarge the opening in the bone leading to the external attic, and to make the suppurating cavity more accessible to antiseptic treatment. The operative exposure of the external attic in cases of obstinate septic suppuration, without dislocating the hammer and incus, is one of the most difficult tasks in operative otology. The value of this operation is indicated by the fact that some cases of attic suppuration heal spontaneously as soon as the diseased process has produced extensive openings in the external wall of the attic [such as an ideal operation would bring about.—D. G.]. The gouge forceps which have been recommended by various operators had been proved to be useless. Of late Prof. Politzer had procured a series of long burrs, provided at

their anterior extremity with small protective plates, by means of which he could file out a part of the wall of the outer attic and mastoid antrum (using an electro-motor) without dislocating the hammer and incus. He hoped soon to carry out this operation in several appropriate cases. He only resorted to the Stacke operation where the hearing power was greatly reduced, and if vertigo, headache, and other symptoms were present, which indicated a stagnation of pus or the formation of a cholesteatoma in the attic and antrum. Collections of cholesteatomatous epidermic masses in the external attic called for periodical and continuous irrigation by means of curved canulæ. Recurrence takes place very frequently, because the growth of the epidermis on the upper wall of the meatus is quicker than on any other parts of that passage. Founded on the belief that in most cases of cholesteatoma in the attic we have to deal with an invasion of epidermis from the upper wall of the external meatus, he recommends that a strip of cutis of from three to four millimètres in width should be removed from the upper wall of the osseous meatus, and he showed the instrument necessary for the purpose. The portion of the wall thus laid bare became again covered by a cicatricial tissue, bearing epidermis. But its growth under these circumstances is extremely slight. Prof. Politzer hoped within a short time to show the result of this operation.

(To be continued.)

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## ABSTRACTS.

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### MOUTH, &c.

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**Baurowicz, A.** (Cracow).--*A Pedunculated Adeno-Carcinoma of the Soft Palate.*

"Archiv für Laryng. und Rhinol.," Bd. VI., Heft 1.

THE patient, a man aged sixty-seven, complained that for fourteen years he had felt something moving in his throat which rendered swallowing difficult and disturbed his sleep. He had no pain. His speech could be understood only with difficulty.

On examination, a growth as large as a hen's egg was seen occupying the space between the tongue and hard palate, so that the parts behind were concealed. It was found to be attached by a short pedicle to the free edge of the soft palate on the left side, close to the uvula. The surface of the tumour was nodulated and covered in places with necrosed masses. The pedicle was easily broken with the finger. The mucous membrane in its immediate neighbourhood was found to be quite normal.

The appearance of the growth, the absence of enlarged glands in the sub-maxillary region, and the patient's statement led the author to suppose that he had to deal with a fibroma. On dividing the tumour, however, besides the connective tissue which radiated from the pedicle to the periphery and formed its greater part, granular areas were observed. These proved to be nests of epithelial cells, which had originated from the epithelium of the glands. As ordinary adenomatous tissue was also visible here and there; it was evident that a fibro-adenoma had probably

been first present, in which a typical proliferation of the epithelial cells had subsequently taken place. Throughout the section numerous round cells were seen in the connective tissue indicating active growth.

*A. B. Kelly.*

**Bernheim.**—*Stomatitis Ulcerosa.* K. K. Gesellschaft der Aerzte in Wien, June 18, 1897.

THE author has seen some cases of stomatitis ulcerosa in which only the tonsils were ulcerated. He thinks one would make a mistake in these cases at first sight thinking of diphtheria; but the disease always being on one side with very few general symptoms excludes the diagnosis of diphtheria. The result of the microscopical examination was always a bacillus and a fungus.

*R. Sachs.*

**Garel.**—*On Intermittent Paresis of the Palate in Neurasthenia.* "Arch. Internat. de Laryng., Otol., et Rhinol.," May and June, 1897.

THREE cases are reported of intermittent paresis of the soft palate, with resulting nasal intonation, occurring in neurasthenic subjects from whose history diphtheria was absent, and in whom no evidence of actual nerve lesion was forthcoming. Emotional disturbance was present as an exciting factor. In two of the cases the attacks of paresis were of very short duration, occurring at frequent intervals. A sentence commenced in a normal manner would gradually become incomprehensible from decreasing activity of the palate muscles, and by observing the palate through the anterior nares while the word "deux" was repeatedly uttered, the elevation of that organ was seen to become progressively defective. It would appear that though the nerve impulse was complete in itself, the power of sustaining an effort was wanting. In one of the cases paresis, on more than one occasion, lasted for some weeks; and owing to nasal regurgitation of food, tube feeding became necessary. Electrical treatment seemed to give no benefit, and the ultimate result of antispasmodic measures had not been reported to the author.

*Waggett.*

**Gaudier.**—*Œdematous Urticaria of the Mucous Membrane of the Mouth and Fauces.* "Echo Méd. du Nord," Aug. 8, 1897.

THE case of a medical student who, two hours after a large meal of snails highly spiced and doubtful as to freshness, awoke with the sense of foreign body in the throat and difficulty of breathing. The tongue and mucous membrane of the cheeks were œdematous and covered with large urticaria wheals. The uvula was swollen to the size of a walnut, and on its surface were some small white vesicles. There was no sign of urticaria on any other part of the body.

Scarification of the uvula, boric mouth washes, and active purgation gave complete relief in twenty-four hours. The author follows with a *résumé* of similar cases to be found in literature.

*Waggett.*

**Heath, Christopher.**—*A Clinical Lecture on a Case of Hypertrophy of the Gums.* "Brit. Med. Journ.," May 1, 1897.

THE patient, a young man aged twenty-six, had suffered from hypertrophy of the gums ever since the age of four. At that age the hypertrophied gums were cut away, but recurrence of growth soon followed. On admission the external deformity was well marked, and upon opening the mouth the gums of both jaws were seen to be enormously hypertrophied; most of the teeth were loosened and displaced. The patient was placed in the recumbent position, with his head hanging over the end of the table. All the loose teeth of the upper jaw were rapidly extracted, and the hypertrophied gum, down to the alveolus, cut away with a pair of scissors. The bleeding was free, but was controlled partly by the use of the cautery, and partly by plugging the sockets of the teeth. A micro-

scopical examination showed that the mucous membrane covering the growth was healthy, the bulk of it being composed of delicate bundles of wavy fibrous tissue, which interlaced. Between the bundles were numerous cells, in some places forming large clusters. Numerous vessels were scattered through the growth.

W. Milligan.

## NOSE, &C.

**Alexander, A.** (Berlin).—*The Mucous Cysts of the Maxillary Sinus.* "Archiv für Laryng. und Rhinol.," Bd. VI., Heft 1.

SIX cases are reported in which the author diagnosed a cystic condition of the antral lining membrane by making the exploratory puncture and aspirating serous fluid. Attention was directed to the antrum in these cases, chiefly by the recurrence of nasal polypi, or the results of transillumination. One patient complained of the occasional discharge of a greenish yellow fluid from the right nostril; both inferior turbinates were much hypertrophied, and muco-pus was present in the middle meatuses; transillumination was the same on both sides. Two syringefuls of fluid were aspirated from the right antrum; nothing was obtained from the left. On opening the right antrum small cysts were found on the anterior and median walls and a tag of membrane, which proved to be the wall of a large cyst.

The author reviews what has been written as to the frequency, multiplicity, site, and appearance of these growths. From a study of the symptoms in eighteen published cases he shows that the disease runs its course either without symptoms, or presents merely those produced by other foreign contents in the antrum. Thus, frontal headache, dull feeling in the head, pressure in the forehead and giddiness, which have been noted in the above cases, may also be associated with empyema, or tumours of the antrum. Transillumination gives but slight assistance in forming a diagnosis. Even the exploring needle may fail to reveal the presence of a cyst owing to its position, and it may be necessary to pierce the lateral wall of the nose at a number of points, both in the inferior and middle meatus. The exploratory washing of the antral cavity in these cases is useless, as the serous fluid would not be sufficiently evident. Treatment\* may be called for on account of the distension of the walls of the antrum or pressure symptoms, or, possibly, because of the frequent recurrence of nasal polypi. An attempt might be made to reduce the cyst by frequent puncture, or by the injection of fluids which would set up inflammation within its cavity. The most radical method would be to open the antrum and scrape out its lining membrane.

A. B. Kelly.

**Baratoux** (Paris).—*An Attempt to Classify the Diseases of the Ear, Larynx, and Nose.* "La Pratique Médicale," No. 50, 1896; and Nos. 1-14, 1897.

THE author has adapted the decimal classification of Melvil Dewey to the needs of these specialities. The numbers 1, 2, and 3 have been given to the ear, nose, and larynx respectively. The second figures have the following significations:—0, generalities, congresses, clinics, treatises; 1, normal and pathological anatomy; 2, examination; 3, symptoms; 4, etiology, prognosis, complications; 5, hygiene, therapeutics, operations.

16. Diseases of the ear in general, and diseases of the external ear.

26. Generalized diseases of the nose, nasal fossæ, sinuses, and naso-pharynx, and external diseases of the nose.

36. Diseases common to the mouth, pharynx, and larynx, trachea, lungs, thyroid body, œsophagus, and neck.

17. Diseases of the middle ear.
27. Diseases of the nasal fossæ.
37. Diseases of the mouth.
18. Diseases of the internal ear.
28. Diseases of the naso-pharynx.
38. Diseases of the pharynx.
19. Deaf-mutism.
29. Diseases of the sinuses.
39. Diseases of the larynx.

Each of these divisions is taken up in succession and its different subdivisions indicated; a very detailed and elaborate classification is thus evolved.

A. B. Kelly.

**Blessig.**—*Empyema of the Frontal Sinus; perforation of the Orbit and the Cranial Cavity.* "St. Petersburg Med. Woch.," 1897, No. 26.

A MAN, forty-four years old. No rhinological examination was performed because there were no special symptoms of any disease of the accessory cavities of the nose. Empyema of the right frontal sinus; perforation of the orbit; afterwards of the cranial cavity. Operation. Death three days after.

R. Sachs.

**Cline** (Indianapolis).—*The Sequelæ of Grippe involving the Accessory Cavities of the Nose.* "The Laryngoscope," Aug., 1897.

PFEIFFER'S bacilli with their toxins are the cause of *la grippe*. These bacilli find all the requirements for their growth and rapid reproduction in the accessory cavities of the nose, viz., darkness, warmth, and moisture, absence of disturbance, and abundant absorbing vessels. Active hyperæmia or inflammation are followed by sneezing and watery discharge. This may clear up or become chronic. Retention and pressure cause pain—usually called "neuralgic"—of frontal, temporal, and facial regions. After an ethmoiditis polypi may result, or the antrum of Highmore may be directly affected by discharge flowing from the ethmoidal cells.

Mr. B., aged thirty-two, had *la grippe* of catarrhal type in 1889, with much mental and physical depression. Recovery was slow and incomplete. In spring, 1893, he had another attack, followed by despondence and dismal forebodings. The right nostril was filled high up with polypi, and there was a profuse mucopurulent discharge from the anterior ethmoidal region. The removal of the growths with one half of the middle turbinate, thus improving drainage, gave complete relief.

Mr. S., fifty-two, had two attacks of *la grippe*, the first accompanied by much pain in the head and face, and followed by a profuse muco-purulent discharge from the nose. Much mental and physical depression. The discharge continued more or less four years, when it was increased by a second less severe attack of influenza. A year later, when examined, the middle turbinate on right side found to be very boggy and covered with yellow pus from frontal and anterior ethmoidal cells. Right maxillary sinus was filled with pus. The removal of anterior half of middle turbinated and the drilling of the antrum of Highmore were followed by great improvement, though pus comes from frontal sinus yet.

R. M. Fenn.

**Doyen.**—*Du Tubage du Larynx dans les Opérations sur la Cavité Naso-Buccale, la Plevre, et le Poumon.* "Arch. Internat. de Laryng., Otol., et Rhinol.," May and June, 1897.

THE canula employed is made on the same principle as Trendelenburg's instrument, but is introduced *per vias naturales*. By its use it is possible to administer the anæsthetic at a distance, and without interference with the operator. In operations upon the lung it permits of insufflation of that organ.

Waggett.

**Doyen.**—*Rapid Extirpation by the Natural Passages of Large Naso-Pharyngeal Polypi.* "Arch. Internat. de Laryng., Otol., et Rhinol.," May and June, 1897.

THE author reports three cases in which he has removed large, readily bleeding naso-pharyngeal polypi from children, by rapidly turning them out with a specially devised raspatory. His method has been to seize the polypi with forceps, introduce the finger to make out the seat of attachment, and bring the tumour away whole with one or two strokes of the instrument. Hæmorrhage has been profuse for a moment, but in each instance has immediately ceased on applying pressure. He believes that the rapid act much diminishes the loss of blood on account of its rapidity, and is of opinion that the more time and care spent on precautionary measures the greater is the amount of blood lost. *Waggett.*

**Gaudier.**—*Naso-Pharyngeal Fibroma in an Old Woman; Removal with the Curette.* Cure. "Echo Méd. du Nord," July 25, 1897.

THE tumour, the size of a mandarin orange and bleeding freely after digital examination, was removed with two or three strokes of a large-sized post-nasal curette of the ordinary shape. Some force was used, and the periosteum was in part stripped off the naso-pharyngeal vault. Hæmorrhage was insignificant. *Waggett.*

**Goldzweig, Ludwika** (Poland).—*Contributions to Olfactometry.* "Archiv für Laryng. und Rhinol.," Bd. VI., Heft. 1.

IN these investigations the quantitative estimation of the sense of smell was made by means of an instrument closely resembling Zwaardemaker's olfactometer. The substances used for testing were iodoform, oil of sandalwood, and artificial musk, after having been mixed with litharge and glycerin to form firm masses.

It has already been shown that hearing and vision are diminished during fever; the authoress now proves that olfaction is then also blunted. Her observations were made on patients with hectic fever, or on those whose temperature underwent marked temporary elevation. Such persons present no apparent changes in the nose attributable to the fever, consequently the access of the odoriferous air to the Schneiderian membrane is not affected. Twelve cases are reported in which the olfaction was measured and temperature taken both in the morning and evening. The results clearly show that the sense of smell is more acute in the morning than in the evening, when the temperature is higher.

The action of cocaine was next considered. The sense of smell having been measured, an equal quantity of ten per cent. solution of cocaine was sprayed into both nostrils. The subject was then tested uninterruptedly with iodoform, musk, and sandalwood oil in turn, and the time noted when a change in the perception of the odours occurred. It was found that cocaine diminished the true sense of smell, although sometimes in an irregular manner.

The authoress has also demonstrated the gradual blunting and ultimate abolition of the olfactory sense which follow the prolonged smelling of an odorous substance. During the period of induced anosmia, which lasted several minutes, other odours were perceived.

In addition to the above quantitative measurements, the purely qualitative condition of olfaction in different diseases was investigated. For this purpose, iodoform, menthol, cinnamon oil, glacial acetic acid, etc., were employed. Forty-two patients, chiefly with nervous or infectious diseases, were examined, and in these the sense of smell was found deteriorated both as to quality and quantity. Olfactometry is therefore to be recommended as an aid in diagnosis.

*A. B. Kelly.*

**Jankau, L.** (Munich).—*A New Nasal Opener and Inhaler.* "Archiv für Laryng und Rhinol.," Bd. VI., Heft 1.

FELDBAUSCH's nasal opener is disliked by patients, because when worn it is seen and causes discomfort; in addition, it always acts on both sides. Schmithuisen's instrument is also objectionable, because of the pressure it exercises on the septum.

The author has had a nasal opener constructed, which is easily introduced, can be worn day and night in one or both nostrils without discomfort, and, when *in situ*, is not noticed.

The instrument is made of vulcanite. It is spherical, conical, or egg-shaped, measuring 1.25 to 1.5 cm. in length, and  $\frac{3}{4}$  to 1 cm. in its broadest diameter. It is hollow, with an opening at one pole and another at one side, and is introduced so that the former projects into the inferior meatus, while the latter is opposite the external opening of the nose.

The conditions in which its use is indicated are: chronic nasal catarrh, all chronic affections of the nose and naso-pharynx in which massage of the mucous membrane is employed and the nasal respiration is obstructed; also in cases of hypertrophy of the middle turbinate in which nasal respiration is free during the day but choked at night.

The instrument may also be used as an inhaler by placing in the hollow absorbent paper saturated with a volatile substance.

*A. B. Kelly.*

**Jeanselme and Laurens.**—*Local Manifestations of Leprosy in the Nose, Pharynx, and Larynx.* Soc. Méd. des Hôp. "Presse Méd.," July 24, 1897.

FREQUENTLY the first symptoms of leprosy are nasal, and consist of epistaxis and persistent catarrh, with crust formation. The importance of this point is very great, for the nasal secretion contains Hansen's bacillus in large quantities, and in a virulent condition, and may easily form an infectious medium.

*Waggett.*

**Mink, P. J.** (Zwolle).—*Choanal Forceps.* "Archiv für Laryng. und Rhinol.," Bd. VI., Heft 1.

THESE forceps resemble Jurasz's in shape. The ends are fenestrated, the inner edge being cutting, while the outer is blunt. When closed they are about as thick as a large-sized catheter, and, like it, they are introduced through the inferior meatus. Their position is determined by the posterior edge of the septum, according to Löwenberg's method. Polypi and polypoid vegetations close to the posterior ends of the turbinates can be caught; the inner sharp edge of the fenestra is intended to punch them off, while the outer blunt edge holds them fast until withdrawn.

*A. B. Kelly.*

**Polyak, L.** (Buda-Pesth).—*Contributions to the Pathological Anatomy of the Hypertrophied Nasal Mucous Membrane.* "Archiv für Laryngologie und Rhinologie," Band VI., Heft 1.

IN this paper the author deals with only a few of the results obtained by him in the course of an extensive investigation of the structure of nasal polypi and mucous membrane hypertrophies—namely, with the hyaline and colloid degeneration of the cells. The following are some of his conclusions:—

In the hypertrophied nasal mucous membrane, including polypus and Hopmann's "soft papilloma," homogeneous globules are found in the connective tissue, their number being proportionate to the cells. In the most of these bodies the atrophied nucleus is recognizable, proving that the globules originate from cells undergoing degeneration. The retrograde changes begin by the cell swelling and the protoplasm becoming dark and flaky. Subsequently the flakes increase in size, becoming rounded and shining. The cell, which is now considerably enlarged and spherical, assumes a raspberry-like appearance. The small globules then unite to form several

larger flakes; the atrophied nucleus is usually still visible. Finally, perfectly homogeneous round or oval formations result.

In the epithelial layer, in large round cavities which have been produced by the pushing apart of the epithelial cells, the following structures occur:—(a) Collections of white blood corpuscles with fragments of nuclei. (b) Homogeneous, spherical structures identical with those described as occurring in the connective tissue layer. (c) Scattered migratory cells and abundant fatty granular cells, proving anew that the latter possess the power of movement.

In the homogeneous structures enclosed in the cavities of the epithelium the atrophied nucleus is still frequently visible. Sometimes, however, when they are composed of several smaller globules the nucleus appears in the middle as an irregularly compressed body. The author has not observed the initial stages of degeneration in the epithelia.

A transition from the fatty granular cells or epithelial cells to the homogeneous cells is not demonstrable.

Distinct transition forms are seen only in the round cells of the infiltration; the homogeneous structures appear wherever an infiltration of round cells is present, but they are always absent when the tissue is fibrous and poor in cells.

The homogeneous bodies consist of a colloid substance—at least, they react to stains and concentrated acids and alkalies exactly as the colloid of the thyroid gland. At first they are made up probably of a more plastic material, so that larger flakes can arise by the closer packing and confluence of the small spheres.

It may be assumed with a good deal of certainty that the presence of cells in the hypertrophied nasal mucous membrane which have undergone hyaline and colloid degeneration is not accidental, but is closely connected with the want of tendency of these hypertrophies to undergo spontaneous resolution.

A. B. Kelly.

**Turner, A. L.** (Edinburgh).—*Papilloma of the Septum Nasi*. "Arch. of Otol.," April, 1897.

THE growth, distending the side of the nose, and pushing up so as to interfere with vision and with the flow of tears, in a gamekeeper aged fifty-three, had taken three years to develop. There was no backward extension, and no enlargement of glands. The growth was apparently covered with nasal mucous membrane, and by means of the probe was found to be growing from the septum. It was removed by external operation, and along with it the septal mucous membrane, as there were several accessory growths of small size. The diagnosis of papilloma was confirmed by microscopical examination. Dr. Logan Turner details the points of distinction between this rare form of growth and the commoner papillary hypertrophies of the turbinated bodies. He appends a valuable bibliography.

Dundas Grant.

**Snow, Sargent F.** (Syracuse, N.Y.).—*Headaches from Nasal Causes*. "Medical News," July 10, 1897.

IN this paper the author first refers to the various authorities who have dealt with this subject, and points out how frequently headache is referred to any other cause rather than to the true one—nasal obstruction. He strongly advocates operative treatment for obstinate cases where there is evidence of nasal disease, draining the accessory sinuses where necessary, correcting hypertrophic enlargements, and removing osseous or cartilaginous shelves or thickenings, where causing pressure; he has found the application of iodole and ether, after cleansing the nose, to give relief, especially in those cases due to increase of pressure on the olfactory region from acute or subacute inflammation, without much chronic disease.

Notes of thirty cases treated, with percentage of relief:—

| No. | Age. | Re-<br>lieved | Intranasal Conditions.                                   | Remarks.   |
|-----|------|---------------|--|--|
| 1   | 32   | 40            | Deep bony shelf pressing into r. mid. turb.              | Severe sick headache each week.                          |
| 2   | 32   | 40            | Enlarged mid. turb.                                      | Bi-monthly sick headache.                                |
| 3   | 45   | 75            | Enlarged mid. turb.                                      | Bi-monthly hemicrania.                                   |
| 4   | 35   | 40            | Septal shelf pressing inf. turb.                         | Severe hemicrania at times each week.                    |
| 5   | 25   | 100           | Septal shelf pressing inf. turb.                         | Frequent hemicrania.                                     |
| 6   | 56   | 100           | Enlarged mid. turb. with thickened membranes             | Severe hemicrania tri-monthly.                           |
| 7   | 55   | 100           | Septal shelf and deflected septum                        | Clavus and general headaches.                            |
| 8   | 30   | 90            | Deflected septum pressing r. mid. turb.                  | Hemicrania once a week.                                  |
| 9   | 32   | 90            | Deflected septum, large shelf, and mid. turb.            | Severe hemicrania. Died of general tuberculosis in 1895. |
| 10  | 25   | 75            | Deflected septum, large shelf, etc.                      | Severe hemicrania when she has colds.                    |
| 11  | 35   | 75            | Enlarged mid. turb.                                      | Severe weekly hemicrania, pressure on top of head.       |
| 12  | 50   | 90            | Atrophic rhinitis, enlarged turb.                        | Persistent general headaches almost constant.            |
| 13  | 17   | 90            | Enlarged mid. turb.                                      | Headaches and pressure on top of head bi-monthly.        |
| 14  | 38   | 100           | Septal shelf and thickened mid. turb.                    | General headaches.                                       |
| 15  | 19   | 100           | Septal shelf and swollen mid. turb.                      | Severe sick headache bi-monthly.                         |
| 16  | 36   | 100           | Septal shelf and swollen mid. turb.                      | Severe sick headaches bi-monthly.                        |
| 17  | 38   | 40            | Long shelf pressing into mid. turb., etc.                | Severe hemicrania once a week.                           |
| 18  | 26   | 75            | Deflected septum, mid. turb., filling infundibula, r. s. | Hemicrania bi-monthly.                                   |
| 19  | 36   | 75            | Thick membrane and enlarged turb.                        | Severe and frequent hemicrania.                          |
| 20  | 27   | 90            | Cartilaginous thickening, pressing mid. turb., l. s.     | Severe frontal headaches, tri-monthly.                   |
| 21  | 65   | 90            | Deflected septum pressing l. mid. turb.                  | General headaches.                                       |
| 22  | 33   | 90            | Thickened membrane on mid. turb. and septum              | Frequent headaches.                                      |
| 23  | 33   | 90            | Mid. turb. pressure on septum                            | Neuralgia and severe headache.                           |
| 24  | 32   | 100           | Mid. turb. pressure on septum, filling infundibula       | Very frequent severe sick headaches.                     |
| 25  | 35   | 90            | Thickenings and enlarged mid. turb.                      | Severe neuralgia, and hemicrania.                        |
| 26  | 28   | 40            | Septal shelf, and thickened membranes                    | Catarrhal headaches.                                     |
| 27  | 40   | 40            | Swollen and sensitive membranes over mid. turb.          | Severe hemicrania, when she has colds.                   |
| 28  | 40   | 100           | Septal shelf, and sensitive membranes                    | Frequent general headaches.                              |
| 29  | 37   | 90            | Enlarged mid. turb.                                      | Very severe sick headaches twice a week.                 |
| 30  | 45   | 40            | Enlarged mid. turb., and poly-poid membranes             | Hemicrania twice a week.                                 |

# LARYNX.

**Boulay.**—*Compressed Air Insufflator.* “Arch. Internat. de Laryng., Otol., et Rhinol.,” May and June, 1897.

THE author has found the somewhat prolonged blast of air inseparable from the use of the ordinary instrument with india-rubber bellows to cause laryngeal distress and spasm. He has therefore devised an instrument in which air is compressed in a small metal reservoir. On pressing a trigger a blast of air of momentary duration is produced. *Waggett.*

**Graham, J. E.**—*Broncho-Biliary Fistula, with the Reports of Two Cases.* “Brit. Med. Journ.,” June 5, 1897.

CASE 1. Illness preceded by hepatic pain two and a half years before, and characterized by free coughing of bile, increased hepatic dulness, pleuritic friction on the right side, and light grey motions. Apparent complete recovery lasting ten years. Then followed a relapse, and on the patient showing signs of general failure an operation was performed. The hepatic and common bile ducts were found to be distended with gall stones. Cholecystenterostomy was performed, making use of the hepatic flexure instead of the duodenum. Patient died twelve days after from intercurrent complications: hæmoptysis, epistaxis, etc. No *post-mortem* was obtained.

The second case followed a kick from a horse, received over the cartilages of the fifth, sixth, seventh, and eighth ribs, and was characterized by pain, pneumonia, and bile-stained serum in the right pleural cavity. Bilious vomiting first appeared eighteen days after the accident. Two operations were performed, and through the two openings so produced bile and mucus escaped. Patient is now slowly recovering.

The author also refers to Courvoisier's twenty-four collected cases, to which he has added ten. Of these ten, two were due to hydatids and the remaining eight to biliary calculi. He also details the various ways in which cholelithiasis may cause broncho-biliary fistulæ. *(R. M. Fenn) Milligan.*

**Hogarth, R. G.**—*Remarks on the Treatment of Cut-Throat, with Notes of a Case Treated by Immediate Suture in Layers.* “Brit. Med. Journ.,” Aug. 21, 1897.

THE author has had under treatment seven cases of cut-throat. In one case the wound was situated above the hyoid bone, in three in the thyro-hyoid membrane, in one in the crico-thyroid membrane, and in one in the trachea. Only full notes of one case are given, in which an extensive wound existed opening up the pharynx and larynx by dividing the thyro-hyoid membrane. The treatment consisted in accurate suturing of the divided tissues layer by layer, after the parts had been thoroughly cleansed. Chromic catgut was used for the deeper sutures, and horse-hair for the skin wounds. The author thinks that cases of cut-throat should be treated by immediate suture, unless the patient is in a dying condition from shock and loss of blood. It is very rarely necessary to give chloroform, the accompanying depression of the nervous system being so great that the wound can be readily manipulated and apparently without pain. Usually primary union follows. The author also considers that it is never necessary to put in a tracheotomy tube at the time of suturing the wound. Should œdema of the larynx and dyspnoea subsequently ensue, a tracheotomy tube can then be inserted. The head should be kept inclined slightly forward and kept fixed. Much depends upon good nursing and judicious feeding. *W. Milligan.*

**Nolténus** (Bremen).—*Removal of a Foreign Body from the Air Passages of a Boy aged four.* "Archiv für Laryngologie und Rhinologie," Bd. VI., Heft 1.

Two days before the patient was seen by the author he had aspirated a glass bead about the size of a pea into his trachea. The foreign body was evidently movable, for with each attack of coughing a characteristic valve-like "flop" could be heard. As it was found impossible to remove the bead *per vias naturales*, either by instruments or by inversion of the patient, tracheotomy was recommended. Before this could be undertaken, however, the boy had a violent attack of choking, owing to the bead having slipped into the left bronchus, which it completely blocked. The trachea was now opened and coughing excited, but the body was not expelled.

The following day the bead was felt with the probe, in the division of the left bronchus going to the lower lobe; its position was confirmed by auscultation. Attempts were made to dislodge the bead with the probe, and to aspirate it with a Nelaton's catheter passed over the probe, but without success.

As the patient's general condition was good the canula was removed, and nothing further tried. Two days later, after an attack of suffocation, it was found that air was again entering the whole of the left lung, and that the bead was moving up and down in the trachea. The edges of the wound were now held apart, and the bead removed with forceps.

The bead, which was faceted and measured eight millimètres in diameter, had thus been six days in the air passages without giving rise to any noteworthy symptoms of irritation.

*A. B. Kelly.*

**Richel.**—*Injections of Hot Water and Medicated Fluids into the Lungs through the Trachea.* Soc. de Biol. "Presse Méd.," July 31.

WATER at the temperature of 60° C. can be injected without ill effect, and even at 65° C. death does not follow. The lungs, however, appear to be very sensitive to antiseptic solutions, and iodine should not exceed '025 gr.; sublimate '0025 gr. to the litre.

*Waggett.*

**Salzburg, S.** (Berlin).—*Is there a Hæmorrhagic Laryngitis?* "Archiv für Laryng. und Rhinol.," Bd. V.

THE author restricts the term hæmorrhagic laryngitis to bleedings beneath the mucous membrane or on its uninjured surface. It would be incorrect, however, to designate all laryngeal hæmorrhages by this name, even if the mucous membrane were uninjured, for the term laryngitis indicates the presence of an inflammatory affection. Hæmorrhages in consequence of injury, or artificially produced in the treatment of catarrh, do not therefore fall under this category. Similarly, traumatic hæmorrhages due to straining the voice, sudden vomiting, and whooping cough, and bleeding from varicose vessels in the larynx, must be left out of account. Further, hæmorrhages in hysterical or neurotic persons, and at the menstrual period—unless accompanied by catarrh—have no claim to the term. Cases in which the cause cannot be determined should be designated hæmorrhagia laryngis rather than laryngitis hæmorrhagica.

Hæmorrhages do not occur solely in laryngitis sicca. The author has seen ten cases of laryngitis hæmorrhagica, in five of which there was laryngitis sicca, while in the other five, acute or chronic catarrh was present. In eighty-nine cases of laryngitis sicca, hæmorrhages were observed only in the five referred to.

In the author's opinion the bleedings accompanying the loosening of the crusts are caused by the increased pressure in the vessels due to coughing, the diminished elasticity of their walls, and the lessened support of the surrounding tissues in consequence of the catarrh. As to the cause of laryngitis hæmorrhagica, the author

holds Rethi's view, attributing it to the great swelling and hyperplasia of the mucous membrane, the increase in size and number of the vessels, the lessened resistance of their walls, and the frequent and periodically increased blood-pressure from coughing, hawking, etc.

The etiology is the same as of chronic catarrh. As the affection is chiefly seen in women, and as the most severe hæmorrhages have been observed during menstruation and pregnancy, it is evident that the explanation is to be found in the changes the vessels of these persons undergo. The condition frequently occurs in purpura hæmorrhagica and cirrhosis of the liver; pseudo-leukæmia and atheroma are also causes.

Every idiopathic laryngeal catarrh is therefore entitled to be termed laryngitis hæmorrhagica which, without external cause and with intact mucous membrane, is accompanied by hæmorrhages on or into the mucous membrane. *A. B. Kelly.*

**Vallas.**—*Median Osteotomy of the Hyoid.* "Presse Méd.," July 17. Soc. de Chir. de Lyon.

THE author proposes this proceeding as a means of reaching foreign bodies, tumours of the epiglottis, pharyngeal strictures, etc., in the place of sub-hyoid pharyngotomy. After division of the hyoid, malignant disease at the base of the tongue can be freely dealt with. The author states that reunion of the fragments is completed in three weeks. *Waggett.*

## THYROID, &c.

**Chauffard and Quéun.**—*Bilateral Resection of the Cervical Sympathetic in a Case of Exophthalmic Goitre.* "Presse Méd.," July 3.

THE case reported is particularly interesting at the present time, as although the superior ganglion and four centimètres of the nerve below it on either side were removed (microscopic examination), no physiological phenomena resulted beyond a temporary myosis, while the course of the disease was unaffected. *Waggett.*

**Doyen.**—*Removal of the Thyroid Body for Exophthalmic Goitre.* Acad. de Méd. "Presse Méd.," July 28.

TWO well-marked cases were reported, from whom had been removed the whole of the enlarged gland with the exception of a piece the size of an almond. Cure remained complete after two and a half years, and four months, respectively. The first patient had, some months after operation, taken sheep's thyroid on her own responsibility. Palpitation, enervation, and exophthalmia thereupon reappeared, but ceased as soon as the drug was discontinued. The author asks why section of the sympathetic should be resorted to when removal of part of an over-secreting gland is so clearly indicated. *Waggett.*

**Péan.**—*Treatment of Exophthalmic Goitre by Resection of the Cervical Sympathetic.* Acad. de Méd. "Presse Méd.," Aug. 4.

EXOPHTHYROPENY was dangerous, and not to be compared in efficiency to thyro-dectomy. The speaker had resected the sympathetic in one case, and obtained diminution of pressure symptoms, but no effect on the nervous elements of the disease. *Waggett.*

**Poncet.**—*Treatment of Exophthalmic Goitre by Resection of the Cervical Sympathetic.* Acad. de Méd. "Presse Méd.," July 28.

THE author had operated on nine female cases. Benefit sometimes lasting, some-

times passing, resulted in all the cases. Older patients did better than young ones. Waggett.

### E A R.

**Baratoux** (Paris).—*On a Unit of Measure for the Examination of the Hearing with the Tuning-fork. Normal Series of Tuning-forks. Result of the Examination of a Patient.* "La Pratique Médicale," No. 9, 1897.

THE author has been able to prove from experiments with fifty-eight tuning-forks obtained from different sources, that they do not always give comparable results when bone and air conduction are considered. For acoustic researches it is necessary to obtain a series of instruments of superior quality as made by Koenig, Appunn, or Edelmann.

Our present method of expressing the results obtained by the tuning-fork tests gives only a vague idea of the auditory function as compared with the normal, and when a patient who has been thus tested returns after a considerable interval one cannot satisfy himself as to whether the disease is stationary or advancing without having recourse to the voice, watch, or acoumeter. If, on the contrary, a unit of measure were employed, every aurist would be able to determine the patient's condition. The author even maintains that the use of certain tuning-forks may mislead in the investigation of lesions of the internal ear. He illustrates his remarks by the report of a case in which the diagnosis was carefully worked out by means of a series of tuning-forks. A. B. Kelly.

**Barling, Gilbert.**—*Three Cases of Otitis Media with Brain Abscess.* "Brit. Med. Journ.," June 12, 1897.

Case I. *Otitis Media, Extradural Suppuration, Cerebellar Abscess, Hernia Cerebelli; Recovery.*

THE patient, a boy aged fourteen, was admitted into hospital complaining of extreme pain upon the left side of his head. The pupils were dilated and equal and early optic neuritis was present. The head was much retracted upon the neck. From an incision behind the left ear pus was discharging; there was also pus in the ear, and several enlarged cervical glands were found. The temperature was about 100° Fahr. and the pulse 76 and irregular. The mastoid antrum was first opened, and after that the bone over the sigmoid sinus and the adjacent parts was chiselled away. A considerable quantity of pus was found in the posterior fossa between the dura and the bone. The lateral sinus was not thrombosed. On pressing the neck pus passed up by the side of the jugular foramen. The parts were now thoroughly cleansed after free drainage had been established. For some days there was considerable improvement, and the retraction of the neck nearly disappeared. On the fourth day after the operation, however, the temperature rose to 101.2° Fahr. and the pulse to 120. There was slow horizontal nystagmus of both eyes, and internal strabismus of the left eye. The cerebellar lobe was accordingly exposed and opened, and an abscess containing about three drachms of pus discovered. A few days afterwards restlessness and headache returned, and a hernia cerebelli was seen to be forming. The hernia gradually attained the size of a large orange, but finally disappeared and complete recovery ensued.

Case II. *Otitis Media, Cerebellar Abscess, Trephining, Death. A Second Abscess found at the Necropsy.*

In this case the patient, a female aged forty-four, had suffered since childhood

from purulent middle-ear disease. When admitted to hospital the patient lay in a semi-unconscious condition. There was a little pus in the right ear, and tenderness over the right mastoid process. There was slight horizontal nystagmus, the temperature was 98·2° Fahr., the pulse 84. The antrum was first opened, and then the temporo-sphenoidal lobe was explored. No pus was found, and so the right lobe of the cerebellum was investigated. An abscess containing a drachm and a half of foetid pus was evacuated at the depth of one inch. For some days afterwards the patient was restless and had a quickened pulse. Five days after the operation twitching of the left arm and leg was noticed, and the temperature rose to 102° Fahr. Several rigors followed, ending in death. At the necropsy an abscess was found at the surface of the cerebellum close to the tentorium, to which the right cerebellar lobe was adherent. This abscess was well above the abscess which had previously been opened. The right lateral sinus was thrombosed, but it was merely an adherent organizing clot.

Case III. *Otitis Media, Cerebral Abscess, Recovery.*

In this case the patient, a female, aged thirty, had for some years suffered from right-sided purulent middle ear disease. When first seen by the author she lay in bed, supine and indifferent. The temperature was 98° Fahr., the pulse 52. A little foetid pus lay in the right ear, but there was no swelling, redness, or oedema in the mastoid, nor any thickening over the jugular vein. The antrum was first exposed, but no perforation was found in its roof. The temporo-sphenoidal lobe was now examined, and an abscess, containing about an ounce of foetid pus and sloughs of brain tissue, was discovered. An india-rubber drainage tube was placed *in situ*. Recovery was uninterrupted.

The author says that he accepts the rule first laid down by MacEwen, viz., to first of all open the mastoid antrum, and to explore its walls for perforations through which suppuration may have extended to the inside of the cranium. Should any localizing symptoms be present they will naturally form a guide as to which lobe of the cerebellum should be explored. Failing any such indications, the writer advises the suggestion first made by Percy Dean to continue the mastoid incision into a scalp-flap, covering a portion of the temporo-sphenoidal lobe, the lateral sinus, and the cerebellum.

To effect this the trephine should be applied one inch and a quarter behind the external auditory meatus, and a quarter of an inch above the centre of that canal. By enlarging the opening slightly upwards the parts above the tentorium can be explored; by enlarging it downwards the cerebellum is accessible, and at the same time the lateral sinus is exposed, and its condition can be determined.

W. Milligan.

**Blake, Clarence** (Boston).—*Intratympanic Disease as a Factor in the Causation of Aural Vertigo*. "Boston Med. and Surg. Journ.," July 1st, 1897.

THE author states that he purposes in this paper to draw attention to such gross interferences with the peripheral organ of equilibration as may serve to explain, in a minor degree, the simplest form of causation of a complex of symptoms which are found in varying extent throughout the whole class of vertiginous cases in which the ear plays a part.

He points out that it stands to reason that if the deviation from a line of equilibrium of a ciliate body projecting into the lumen of a semicircular canal, produced by the inertia of a body of fluid from three to five millimètres in length, and less than half a millimètre in diameter, can cause distinct symptoms incident to the sense of motion, that a permanent deviation of a ciliary body from its normal position, as a result of pressure upon the body of the fluid into which it projects, would bring about a sense of motion, the permanency of which would be

dependent upon the continuance of the pressure or the sensory adaptation to the abnormal condition. He draws attention to the fact that, from clinical observation of cases of distinctly aural vertigo, first, the sense of degree of disturbance of equilibration is, all other things being equal, in definite relationship to the degree of fluid displacement induced by mechanical causes; and, secondly, that the auditory nerve offers no exception to the general rule of acquired toleration of a disturbing influence of a degree within the possible limits of compensation.

The author mentions two cases to illustrate what he terms the grosser forms of mechanical disturbance: one where a granulomatous mass, pressing on the stapes and causing vertigo, was removed by the process of morcellation, with almost immediate relief; and the other when the removal of a cholesteatomatous mass from the upper and posterior portion of the epitympanum gave distinct relief to the symptoms of pressure and vertigo present.

*St George Reid.*

**Bronner, Adolph.**—*A Case of Abscess of the Temporo-sphenoidal Lobe Opened and Drained through the Osseous Auditory Meatus.* "Brit. Med. Journ.," Aug. 21, 1897.

THE patient, a male aged twenty-eight, had suffered from chronic suppurative middle ear disease for five years. Suddenly he was taken ill in his office, and was removed to his home. When seen by the author three days afterwards he was semi-comatose, but complained of intense and unbearable pain in the head; the pulse was 60, the temperature 104° F., and the optic discs were inflamed and their edges blurred. A large incision was made around the left auricle, the cutaneous auditory meatus was cut through, and the auricle drawn downwards. The remains of the membrane and of the ossicles were removed. With a sharp chisel the upper wall of the osseous auditory meatus was removed, and afterwards the root of the zygoma, in this way opening up the cerebral cavity.

The dura mater was incised, and a MacEwen's pus searcher passed upwards and inwards for about one inch. A large abscess cavity was in this way discovered. The attic and adjoining mastoid cells were freely opened and freely scraped. The cutaneous auditory meatus was slit open so as easily to admit a finger, and its upper and posterior parts were excised. A rubber drainage tube was now passed through the upper wound above the ear into the abscess cavity, and the wound plugged with gauze and iodoform. During the first ten days the drainage was conducted through the upper wound, after which the ear was drawn up and the tube passed through the enlarged cutaneous auditory meatus. The abscess cavity was never syringed, but insufflations of boric acid and iodoform were used. The advantages of this method of operating are—

1. Good and efficient drainage from below.
2. The easy maintenance of the drainage tube *in situ* for long periods without any inconvenience.
3. The ease with which the diseased attic and antrum can at the same time be treated.
4. The fact that only one incision and one operation are necessary.

*W. Milligan.*

**Dalby, Sir W.**—*A Note as to when Incision of the Tympanic Membrane should be Performed in Acute Inflammation of the Middle Ear.* "Brit. Med. Journ.," July 24, 1897.

THE writer takes exception to a recently published statement by Mr. G. Field (*see abstract, page 579*), who says: "I feel confident that every year, owing simply to the non-discovery of pent-up pus in the tympanic cavity, scores of children die or fall victims to chronic hydrocephalus or complete idiocy." The writer remarks that

he cannot recall a single instance in which inflammation of the tympanic cavity has produced either hydrocephalus or idiocy. He also adds that the physical appearances of acute inflammation of the membrane in infants are usually of no help, for they are frequently absent, and as frequently as not the most that can be seen to be abnormal are the appearances which show a closed Eustachian tube, and perhaps some congestion of the vessels. The main symptoms we have to rely upon are pain and restlessness. In many cases the use of leeches and hot fomentations will cut short inflammations of the tympanic cavity, and, where they fail, a vertical incision should be made in the posterior segment of the membrane. Even if no pus be present the incision will do no harm, and where it is present the relief afforded is marvellous. In adults the presence of fluid in the middle ear can, as a rule, be easily determined, either by ocular inspection, or by the passage of the Eustachian catheter, when the characteristic moist *râle* indicative of secretion will be heard.

W. Milligan.

**Dench, Edward** (New York).—*The Operative Treatment of Suppurative and Non-Suppurative Middle Ear Inflammations.* "Medical News," July 3rd, 1897.

THE author upholds middle ear operation in both these forms of disease, but points out the necessity of a careful selection of cases, and that the form and extent of the operation must depend entirely on the parts implicated. He draws attention to the fact that in many instances an unfavourable result was simply due to the incompleteness of the operation, and holds that the incus is involved in eighty-five per cent. of all cases of caries of the ossicles. He deals at length with the methods of operating and operative technique, and describes the various steps in the operation for removal of the ossicles. He refers to the gratifying results sometimes obtained where the suppurative process has undergone spontaneous cure, and operative measures are adopted for the improvement of the function of the organ, and warns the surgeon against forgetting the fact that increased tension in one ear will sooner or later impair the function of the other. After referring briefly to the various forms of artificial drum and dealing with the necessity of a careful functional examination to determine the condition of the internal ear before operating, he concludes by alluding to the precautions as to dressing and drainage necessary for the success of the operation.

StGeorge Reid.

**Field, G. P.**—*On some Typical Cases of Diseases of the Ear.* "Brit. Med. Journ.," June 12, 1897.

*Acute Otitis Media in Young Infants, presenting symptoms simulating those of Meningitis.*

IN these cases paracentesis is necessary, followed by the use of Politzer's bag, and evacuation of the pus. In infants the symptoms produced by pent-up pus in the middle ear may be very serious, and closely simulate those of posterior basic meningitis. The author quotes some valuable observations upon this point by Drs. Cheadle, Barlow, and Lees, and winds up his own remarks by saying: "To this testimony (that of the above-named gentlemen) I have to add only that I feel confident that every year, owing simply to the non-discovery of pent-up pus in the tympanic cavity, scores of children die, or fall victims to chronic hydrocephalus, or complete idiocy."

*Influenza.*—The author's plan if there be acute inflammation, and the pain be severe, is to leech repeatedly until all suffering has subsided, and to syringe the ear very gently six times a day with a solution of potassium permanganate. To cause healing of the perforation he uses an application of nitrate of silver (gr. xv.- $\frac{3}{4}$ .) to its edges.

*Boils in the External Auditory Meatus.*—For the relief of pain the author believes that nothing is better than glycerine. It acts by relieving tension, and, when used, should be mixed with an equal quantity of tincture of opium, and some boric acid, and applied on wool. Yeast taken internally is useful. Care should always be taken to ascertain that in the case of boils the *fons et origo mali* is not an escape of sewer gas. W. Milligan.

**Lee, Charles** (Liverpool).—*Two Cases of Exostosis of the External Auditory Meatus.* "Scalpel," July, 1897.

THE notes of two cases read before the Chester Medical Society. In the first case one-third of the exostosis was removed by means of burrs, which proved to be sufficient to give relief to the painful symptoms complained of. In the second case, where pain and deafness was complained of, with diminished bone conduction, the growth was removed with a mallet and chisel. The patient made a satisfactory recovery; a fortnight after the operation there was still slight discharge, but the parts seemed to be healing satisfactorily. The author does not mention the result as to the deafness. StGeorge Reid.

## ANNOTATIONS.

### ON VALVULAR ACTION OF THE EUSTACHIAN TUBE.

A CASE exhibited by Prof. Gompertz before the Austrian Otological Society (*vide* p. 562 of this number of the JOURNAL OF LARYNGOLOGY), illustrates a very important point in connection with the physiology of the Eustachian tube and tympanum. The superior half of the membrane in general, and the postero-superior quadrant in particular, bulged to a very remarkable degree. Prof. Gompertz attributes this to overfilling of the tympanum with air, owing to a pumping action of the Eustachian tube, as if by a kind of vermicular movement air was carried up the tube into the cavity of the drum. This would result from the following mechanism. If the tube, having gaped more or less in its whole extent, closed first at its pharyngeal extremity and then in the remainder of its length from within outwards, air would be carried into the tympanic cavity so as rapidly to produce over-distension. Physiologically this takes place within certain limits, and we are bound with Secchi (Roman Congress, JOURNAL OF LARYNGOLOGY, VIII., p. 405) to admit that, without some degree of distension of the tympanum, the convexity of the radial fibres of the membrane pointed out by Helmholtz cannot be explained. Under abnormal circumstances, such as the nasal disease found in Gompertz's cases, the process becomes exaggerated and a most puzzling appearance of the membrane is produced.

*Dundas Grant.*

PERIPHERAL POLYNEURITIS OF THE AUDITORY AND  
LARYNGEAL NERVES.

By DUNDAS GRANT.

THOSE who finished their medical education twenty years ago, or even less, may never have heard of the disease now so well known as "peripheral polyneuritis," and may have missed the flood of light which its recognition has cast upon many obscure and apparently hopeless cases of disease. The present writer's experience would lead him to class its discovery along with that of the treatment of myxœdema, as among the most brilliant practical additions to medical knowledge acquired since his entrance into active medical life. The latter is perhaps more sensational in its development, but its application is fairly obvious; and restricted to a comparatively limited number of individuals. Peripheral neuritis, on the other hand—and especially that form of it arising from alcoholic poisoning—is insidious, and apt to be overlooked; but it is frequently to be found when looked for, and the results of its treatment when detected may be described as little short of marvellous.

That the nerves connected with the organs studied in our speciality should be attacked by this disease is no matter for surprise, and it is only strange that references to such conditions should be so few in number.

Alcoholic paralysis of the auditory nerves has received study at the hands of Prof. Kiesselbach, and his observations were brought before the notice of the South-West German Society of Neurologists and Alienists by Prof. Stumpell ("Neurologisches Centralblatt," p. 610, and "Lancet," 1897, Vol. II., p. 553). The condition is a true nerve deafness; it tends to pass off in three weeks and to be replaced by noises in the ear. Its occurrence as a possible cause of nerve deafness or tinnitus ought to be kept well in mind by the otologist in those cases—alas, how many!—in which the diagnosis is obscure and the results of treatment disappointing.\* Dr. Ferdinand Alt has also published<sup>1</sup> the particulars of a case of alcoholic neuritis of the auditory nerve in which the ophthalmoscopic examination afforded the most valuable confirmation of the diagnosis.

Two cases in which paralysis of the left vocal cord was with every apparent probability due to alcoholic neuritis of the recurrent laryngeal nerve, were described by the writer in a paper read before the French Laryngological and Otological Society in April of this year.<sup>2</sup> The after history confirmed the diagnosis, and the cases appear almost unique in literature, though perhaps they may have been more frequently observed than described.

To redeem specialism from the suspicion of narrowness, or what Sir William Gowers has termed exclusivism, the specialist must take account of every advance in general medicine and surgery; and to the otologist and laryngologist we cannot too strongly recommend a careful study of the general history of the disease known as poly- or peripheral neuritis.

<sup>1</sup> "Monats. für Ohrenheilk.," March, 1897, p. 86.

<sup>2</sup> "Rev. Hebdom. de Laryngol.," etc.

## THE AUSTRIAN OTOLOGICAL SOCIETY'S ANNUAL MEETING.

IN our present number we have the pleasure of placing before our readers a somewhat condensed translation of a portion of Dr. Pollak's interesting report of the recent "Otologentag"—an annual meeting of two days' duration of the Austrian Otolological Society. The fifteen communications with the resulting discussions cover a large amount of ground, and bring many more or less burning questions well up to date.

One of the most valuable and practical discussions was initiated by Dr. Panzer with his paper on "Radical Mastoid Operations in Children." Out of eighteen cases there were ten of acute caries and eight of chronic suppuration, with cholesteatoma or other conditions. The results of his active operative treatment were most encouraging, and met with general approval. Prof. Gruber, however, dwelt on the relatively benign course of chronic suppurative otitis in children as compared with adults, owing to the incomplete junction of the elements of the temporal bone. He urged that this permitted of the more ready spontaneous passage outwards of the excitors and products of inflammation. This is surely a double-edged protector, as the condition described is equally favourable to an invasion inwards—an occurrence of no great rarity. We trust the Professor's disciples will not take these theoretical utterances too seriously, but that the timely adoption, in the acute stage, of the comparatively easy operation of opening the child's accessible antrum may prevent the multiplication of cases of chronic suppurative otitis, with its well-known deplorable sequelæ. Dr. Kaufmann's rather unhappy analogy between tuberculous disease of joints and that of the petrous bone, and the application of the principle of non-interference to the latter as some surgeons apply it to the former, was at once confuted by Dr. Panzer. This speaker had only to point to the anatomical relations of the petrous bone and to cite its proximity to vital parts, extension to which might occur with fatal result at any moment.

Dr. Spira, in his "Few Words on the Conservative Treatment of Chronic Otorrhœa," insisted that—in view of the difficulty in deciding, in any given case, that recovery was possible without operative interference—the surgeon should leave nothing untried before resorting to the knife, unless actual danger was imminent. The last five words obviously beg the whole question; for at what moment can we say that a patient with chronic otorrhœa is absolutely free from danger? Painful experience teaches the most conservative-minded practitioners of the dangers of delay, though they long for milder means and weigh respectfully all arguments in favour of bloodless methods.

Prof. Politzer's further "Pathologico-Anatomical Contributions to the Study of Diseases of the External Attic" merits careful study as an object lesson in the true methods of advancing otology—namely, by the application of anatomical and clinical observation to the elucidation of a class of cases too little discussed in the recognized text-books and too often overlooked by the practitioner, or slumped with the mass of otorrhœas or polypi. According to Prof. Politzer, acute suppuration in the attic is set up by suppurative inflammation in the middle; but it has

been urged—and, we think, correctly—that it may arise from disease of the external meatus. However that may be, its recognition is of the greatest importance—though we are convinced that, as heretofore, there will always be certain cases of this affection the localization of which will only be ascertained on the subsidence of the acute inflammation. Several cases of fixation of the malleus caused by this affection have recently come under our notice, and afford interesting evidence of the value of Prof. Politzer's researches in this direction. The disturbance of hearing was very considerable—unrelieved to any extent by inflation, but very considerably by the forcible mobilization of the bone by means of Siegel's suction speculum or a fine hook. We recommend the "Contributions" to our readers' careful attention.

Among other interesting communications we may note Professor Urbantschitsch's contribution to the subject of "Apparent Movements and Vertigo." In his experiments apparent rotation of the diameters of a circle on a board in front of the patient took place, when the ear was stimulated by means of noises or syringings. His observations are interesting in connection with the form of vertigo described by Prof. Guye so graphically in the Otological Section of the British Medical Association in 1894, in which the surrounding objects appeared to move in a vertical circle like a cart-wheel, but generally situated obliquely and somewhat laterally.

Dr. Gompertz, in a paper on "Inflammation of the Ear in Sucklings," draws well-deserved attention to the necessity for not shirking the examination of the ears in very young infants—an error too often committed. He gives some very useful instructions, to which might have been added the direction to draw the auricle backwards and downwards instead of backwards and upwards, as in the adult.

The "Functions of the Cochlea" are discussed by Dr. Hammerschlag in the light of some fairly convincing conclusions deduced from the consideration of certain points in its development. He adduces arguments in favour of the view that the hearing of a musical tone depends on the setting into vibration of a few fibres of the basilar, while for noise the whole set of fibres are more or less shaken up. On the assumption that the hearing of low tones is a more delicate function than that of high ones, he holds that when the auditory nerve trunk as a whole is affected in an incompletely destructive lesion the finer function is the one most readily and soonest impaired. Hence in such a lesion of the trunk there is "nerve deafness" with diminished hearing for the lower tones. In the labyrinth, on the other hand, the most vulnerable part is the lower turn which is believed to subserve hearing for the higher tones. When, then, with nerve deafness the loss of hearing is chiefly for such tones, we may assume that the lesion is in the cochlea. These views afford interesting confirmation of those of Gradenigo which we have frequently cited in the JOURNAL.

We trust that those of our readers who are interested in otology will study the report we offer them, in spite of its somewhat condensed character and the literary defects inherent in the translation even of the able abstracts of the papers drawn up by Dr. Pollak. *Dundas Grant.*

## REVIEWS.

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**Sendziak, John** (Warsaw).—*The Malignant Laryngeal Tumours (Carcinomata, Sarcomata): their Diagnosis and Treatment.*

IN our last issue we published the conclusions, in all forty-five in number, at which Dr. Sendziak had arrived in this important work. The issues, however, are of such importance that it is impossible to pass over this treatise with a mere reference to the conclusions at which he has arrived, and so we deem it advisable to draw the attention of workers in our special department to a more detailed reference to some of the conclusions. The author has collected much valuable information relating to four hundred and fifty-two cases of carcinoma, and fifty of sarcoma, and has laid the profession under a deep obligation for the great labour he must have undergone to put such magnificent material on record. The first chapter is devoted to a somewhat brief historical record of the subject, the second deals with the etiology, the third with the pathological anatomy, the fourth with the symptomatology, the fifth deals with the course of the affection, the sixth with the diagnosis, the seventh with the prognosis, the eighth with the therapeutics.

The work is divided into two sections, the first dealing with carcinoma and the second with sarcoma, and he has pursued a similar course in the following chapters, from the history of the affection to the therapeutics in referring to the latter affection. Following this we have a reference to the works bearing upon the subject, and literature generally, amounting in all to six hundred and forty-four different names. In addition, Dr. Sendziak has compiled tables of statistics bearing upon thyrotomy, partial and unilateral extirpation, total extirpation, comparisons of the results of different operations in sarcoma; and following the same order of the general arrangement of the book, he also gives us tables bearing upon these different points in sarcomatous affections. Last of all, we have tables giving comparative results of operations in sarcoma and carcinoma of the larynx. When we say that throughout the work the same interest is exhibited in arrangement, compilation of tables, references to literature, and deductions from the valuable facts which he has placed before the profession, one can get some idea of the enormous task which Dr. Sendziak took upon himself, and we are bound to acknowledge at once the success which has attended him in his labours. The collection of such a mass of material in itself, as we all know, must have entailed an amount of labour which can only be fully appreciated by the author; but he has his reward in the fact that he has placed before the profession an historical work which is bound to have an immense influence, not only in the literature of the subject for all time to come, but in the practice of laryngeal surgery. Dr. Sendziak will understand us when we say that there are certain parts of the work about which something more could be said with advantage, such as in the chapter on the history of these affections. The etiology has been well written, but,

as Dr. Sendziak says in one of his summaries, the causation of laryngeal cancer, as all cancers in general, is not yet fully understood.

However, we have here presented to us a fair statement of the various factors which, in his opinion and by universal consensus of opinion, are important in the study. His references to pathology are also valuable, while the chapters on both sections referring to the symptoms, the diagnosis, prognosis, and treatment, cannot, in the present state of our knowledge, be over-estimated. Throughout the work has impressed us as one of the most valuable contributions placed before the profession, and we have the greatest pleasure in placing upon record our admiration of the thoroughness with which the whole subject has been treated.

It might not, however, be out of place to draw attention to some interesting points in connection with the author's conclusions. Little more than we have already indicated may be said about his first conclusion which bears upon the history and general interest in the subject. In his second the majority of observers will be inclined to agree, although it need hardly be pointed out that when he says endolaryngeal operations are without influence in the development of laryngeal cancers from tumours, papillomata, etc., some members at least of the profession (as we know from recent controversies) may have something to say. Dealing with his conclusion relating to contagiousness of cancer, heredity, age, sex, infrequency as compared with other organs, he seems to be in agreement with the majority of writers. The classification of cancers into primary and secondary, their mode of origin, their different forms, as referred to in Conclusions 9 to 11, do not call for special criticism. The various things included under the headings 12 to 23 cover such a number of different points of interest—as will be seen from the reprint of his summaries in our last number—that it is impossible to deal with them here, and when we pass to the other conclusions, from 30 to 34, a general acceptance of his views is possible. Still further on, when he speaks of the treatment to be employed where operation cannot be performed (36), the frequency of the different forms, the structure, the course of the disease, difficulty in diagnosis, and comparative value of prognosis, we are inclined in general to agree again.

Of all his conclusions, however, those which are of supreme interest refer to the different methods of treatment, and here we are largely on debatable ground.

The great question for the surgeon and patient alike lies in this direction; and while we know of endolaryngeal methods, and setting aside all operative treatment which is purely for the alleviation of symptoms, such as tracheotomy, we have at least three great problems placed before us—the first bearing upon total laryngectomy; the second, partial laryngectomy; and the third, thyrotomy. It is only from a study of a work such as this that some general idea may be obtained by which the surgeon is to be guided in proceeding to the relief of the individual patient before him. Referring to the first of these, complete laryngectomy, Dr. Sendziak states that during the years 1881 to 1888 seven permanent cures out of one hundred and ten cases are to be recorded—figures which speak for themselves, however they may be explained. In his conclusion

No. 29 he states (based upon reference to one hundred and eighty-eight cases) favourable results have been obtained in 12·3 per cent., of which only 5·8 per cent. have been absolute recoveries. Keeping these figures in mind in trying to weigh the question, one may, in a general way, agree with him in stating that this method should be applied, without hesitation, *in suitable cases*, as he gives 32·4 per cent. relapses, and 44·7 per cent. of deaths. Dealing with partial laryngectomy under heading No. 28, he states that in partial laryngectomy, based upon one hundred and ten cases in his statistics, we find 22·7 per cent. favourable results, of which 11·8 per cent. may be considered recoveries. The author states that it is the best therapeutic method in this disease (of course in proper cases), as we have only 28·2 per cent. of relapses, and 26·3 per cent. of deaths. Passing to the question of thyrotomy based upon a table of ninety-two cases in his statistics, Dr. Sendziak says this is a very valuable therapeutic method, as it gives 21·7 per cent. of favourable results (8·7 definite recoveries), with 53·3 per cent. of recurrences. Here the author makes the curious remark that it is almost harmless, as there are only 9·8 per cent. of deaths after operation.

When we are called to recommend in a given instance which one of these three methods ought to be pursued, we have to remember that a second and important question is involved in the consideration of the above, viz., the stage in which the disease is present. Dr. Sendziak himself in his conclusion No. 21 discerns four phases in the treatment of laryngeal cancer: firstly, nihilism in therapeutics (ancient times); secondly, rational therapy from 1873; thirdly, the period of great oscillation of opinion from 1881; fourthly, the phase of sober criticism from 1888 to the present time. Sir Felix Semon, in a most valuable contribution, to which we intend to refer very shortly, considers that this latter phase might have been better termed the period of improved diagnosis and appliances, and every worker in this department is now agreed upon the great necessity of early diagnosis. The reason for this is not difficult to seek, because, of the three methods we have just referred to, laryngectomy is the most serious, while one of the other two in suitable cases would, in our opinion, be selected by most surgeons as long as it fulfilled the great object the surgeon has in view, viz., the radical extirpation of the malignant mass. Coming to these two latter, laryngectomy and thyrotomy, Dr. Sendziak believes that thyrotomy is a very valuable therapeutic agent. All the same, however, he makes the statement in Conclusion 28 that partial laryngectomy is the best therapeutic method in this disease. That this conclusion would not be generally accepted might immediately have been predicted, especially in England, where of late excellent results have been obtained; and it is exactly on this point that we have to thank Sir Felix Semon, in the criticism to which we have referred already, for what in our opinion is a perfectly fair and exceedingly complete argument for the other side. This writer says:—

“Dr. Sendziak sums up the collective results of these operations thus:—  
 “(1) Definite recovery (recovery lasting more than three years), 8·7 per cent. (2) Relative recovery (no recurrence for a year), 13 per cent.  
 “(3) Local recurrence, 53·3 per cent. (4) Died from the operation, 9·8

“ per cent. (5) Too short time under observation (eight cases), 8·7 per cent.

“ I accept these figures at once as the collective result of operations by means of thyrotomy. But I do not admit any of his conclusions drawn from these collective results in the present adaptability of thyrotomy in cancer of the larynx, because the collective results are composed of two unequal groups; and, moreover, the including of the older group extending from 1851 to 1888 tends to throw into the background the true results of that extending from 1888 to 1894, and also the group representing our present knowledge. To prove this nothing further is necessary than to separate Sendziak's chronologically arranged table into the two above-mentioned groups, and then estimate each according to the principles followed by the author. I have done this, and the result is the following table, which I think will astonish more than one of my readers.

“ THYROTOMY IN CANCER OF THE LARYNX.

|                                       | First period,<br>1851-1888. |     | Second period,<br>1888-1894. |
|---------------------------------------|-----------------------------|-----|------------------------------|
| “ Number of cases .....               | 47                          | ... | 37                           |
| “ Definite recoveries .....           | 3 (6·4 %)                   | ... | 11 (29·9 %)                  |
| “ Died from the operation .....       | 3                           | ... | 6                            |
| “ Recurrence .....                    | 37 (80 %)                   | ... | 7 (19 %)                     |
| “ Too short time under observation... | 3                           | ... | 12                           |
| “ Mere explorations .....             | 1                           | ... | 1                            |

“ The following facts may be derived from these simple figures :—

“ 1. That in the first thirty-seven years in which thyrotomy (laryngo-fissure) came into use, out of forty-seven cases, only three—that is, 6·4 per cent.—recovered permanently (that is, according to Sendziak, for more than three years), whilst from the period of early diagnosis and improved appliances the percentage of recovery jumps at once to nearly thirty per cent. (29·9 per cent.). This is a better result, according to Sendziak's own collection, than has been got from any other method of operation in malignant growths of the larynx.

“ 2. If, as Sendziak has done in all other places, we count the definite recoveries with the relative ones—that is to say, if we count among the first too shortly observed group those three cases in which recovery continued for more than a year without recurrence—then the percentage rises to 37·0, and surpasses, therefore, by far any other method of operation. But, further, if we add my two cases in addition to Sendziak's cases (pp. 94, 95), in which recovery has continued for already more than a year, to the relative recoveries of the second period (which would then comprise thirty-nine cases), we get a percentage of recovery of forty-one. This result—which, considering the disease with which we are dealing, must, indeed, be recognized as brilliant—does not yet correspond to the real measure of success to be attained by means of thyrotomy.”

Doubtless Dr. Sendziak, and others who may be inclined to take his view, will point out that early diagnosis and improved methods of treatment must have had and will have an influence upon results in partial

laryngectomy as well. All the same, there is a growing belief in the value of thyrotomy as opposed to other methods, where, aided by early diagnosis and best appliances, this the least harmful of the three procedures may be sufficient to enable the surgeon to remove the whole of the disease. While not going so far as Dr. Sendziak as to call thyrotomy a harmless procedure, still it must ever be remembered that it is the least formidable of the three, and it can be made the first step towards partial or complete laryngectomy should the surgeon find that the deep-seated nature of the affection requires the more serious measure. We would have wished to have gone more fully into detail in considering this important work, but sufficient has been said to indicate its supreme importance and the far-reaching influence it must have in settling many debatable points.

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**Bosworth.**—*A Text-Book of Diseases of the Nose and Throat.* By FRANCES HUNTINGTON BOSWORTH, A.M., M.D. (London: Ballière, Tindall, and Cox, 20 and 21, King William Street, Strand.)

IT is with great pleasure that we again refer in these columns to a work by this distinguished writer. His former edition, consisting of two large volumes, is too well known to necessitate a long reference to its value. It is sufficient to say that on this side of the Atlantic, as well as in America, it has been looked upon as one of the most reliable treatises in our special department, and consequently a new edition is bound to attract a great deal of attention. Dr. Bosworth has thought it advisable to present this work in one volume, inasmuch as the other was considered too voluminous for the use of students. The present work is therefore mainly written for the use of senior students and practitioners, and it may at once be said that it is simply a condensation of his former two volumes. To accomplish this he has eliminated parts which were mostly of value for reference, while he retains all that is of practical use. New material has been added and some changes made, but the author states that this single volume is essentially the same as the larger edition. The work of condensation has been done by his friend Dr. Aimée Raymond Schroeder, whose valuable assistance Dr. Bosworth acknowledges in the preface.

Perusal of the work will convince the reader that the author has thoroughly succeeded in his object, and the general practitioner or senior student will find it a practical and useful guide. His views as usual are well expressed, and impress the reader as being the result of great personal experience, while those who hold different views are not forgotten. Doubtless the work will be welcomed amongst practitioners on the other side of the Atlantic, whilst many on this side will value it, not only because it gives an excellent idea of the views prevailing in a country to which our special branch owes so much, but also for the scientific basis upon which the work rests. The work of condensation has been well carried out, and the illustrations are excellent, including one hundred and eighty-six engravings and seven full-page coloured plates. We can with the greatest confidence commend the work to teachers and students alike.

WE wish to draw the attention of our readers to the announcement respecting the French edition of Zuckerkandl's work on the first page of this number.

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## APPOINTMENTS.

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Mr. E. WAGGETT, M.B., Assistant Surgeon to the London Throat Hospital.  
Mr. FURNESS POTTER, Assistant Surgeon to the London Throat Hospital.

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THE  
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### SOME MODERN ASPECTS OF DEAF-MUTISM.

By JAMES KERR LOVE, M.D.

THE position and condition of the deaf mute makes him the object of study by various kinds of observers. The physiologist and pathologist study his ear with the view to find out why he is deaf and how deaf he is ; the surgeon tries to remedy the defect on which deafness depends ; the sociologist asks why the deaf mute is in the social cosmos at all, if he must always be there, or if no plan can be hit on by which his extinction may be effected ; and the pedagogue looks practically at the question, and taking up the work of the discouraged surgeon makes the best of the remaining perfect senses of the poor deaf mute.

Now, it is impossible in a single paper to discuss the deaf mute from the standpoint of all these observers, but if any one aspect be excluded the others will be the poorer for the exclusion. I propose, therefore, to raise the questions suggested by long practical working as an aural surgeon amongst the deaf, and to treat them so that whatever be the bent of the mind of the individual reader he will find his interest in this unfortunate class stimulated.

1. Regarding our knowledge of the causes of deaf-mutism.
2. Regarding the modern management of the deaf mute.
3. Regarding the prevention of deaf-mutism.

#### *1. Regarding our Knowledge of the Causes of Deaf-Mutism.*

That deaf-mutism is almost always due to destruction of, or non-development of, the parts of the internal ear is to the modern practitioner a truism, but it is a singular proof of the rapid rise of pathological science that this simple generalization could not be made half a century ago. The early half of this century was therefore as prolific of quack nostrums for the cure of deaf-mutism as any similar period during the middle ages. Curtis, who flourished in 1822, and Turnbull, who was boomed by

"Chambers's Journal" as late as 1840, were not a whit clearer about the true state of the deaf mute's ear than Ramirez de Carrion in 1620. Kramer, Wilde, and Toynbee began to recognize the true state of the problem which they had to face in trying to cure the deaf, and, like all honest observers since their time, confessed that they could not cure deaf dumbness.

In connection with the etiology of this condition, the division into congenital and acquired cases must be preserved. Not that the morbid anatomy is essentially different in the two cases, but the pathology is. Most cases of acquired deafness—and when I speak of deafness in this paper I mean deafness which has resulted in dumbness—are due to : (a) the exanthemata ; (b) meningitis, or conditions mistaken for it ; (c) continued fevers, during the course of which meningitis becomes developed. Amongst the exanthemata, scarlet fever and measles are the most destructive to the internal ear. The membranous labyrinth and the nervous structures which it supports are generally attacked from the side of the middle ear, and become either obliterated by osseous deposition or destroyed by suppurative inflammation—most commonly the latter.

It is an interesting pathological fact, however, that often a part of the labyrinth—say, a turn or half a turn of the cochlea—escapes this destructive process, and there is a corresponding and quite as interesting a clinical fact that sometimes a deaf mute hears a high and not a low note, or a deep and not a soprano voice. This fact I have known for a long time, but to Bezold belongs the credit of showing that deaf mutes often possess islands of hearing in the ocean of deafness, islands ranging in size from a tone to half an octave or more. Bezold's observations are very interesting both to the physiologist and the clinical observer, but I do not think they will lead us to a method for making the deaf hear. Seldom does the island belong to the part of the scale corresponding to the tones of human voice as used in conversation, and unless it does so, and is an island of perfect hearing, I don't see how it will be of use. Now, this view of the pathology of deaf-mutism is worth considering. If the deaf mute has no cochlea, or only one damaged in the greater part of its extent, you cannot make him hear, it does not matter what stimulus you apply. Magnifying the sound does not help him ; it gives him sensations, but he cannot hear words. I feel sure that were this fact sufficiently known amongst many of those who work with deaf mutes it would save a good deal of useless although very ingenious effort. In these remarks I am speaking of the true deaf mute, and not of the semi-deaf or those only very hard of hearing.

The pathology of congenital deafness is not well known. We have plenty of *post-mortem* examinations, but often these are useless because the history of the case is not known. If we could get a series of examinations of ears belonging to a family containing several deaf mutes, the type of disease or of non-development causing deafness in that family would be established. This will be a difficult but it is not an impossible observation, and when it is made it will do more to fix our ideas of the immediate cause of congenital deafness than anything that has hitherto been done.

*2. Regarding the Modern Management of Deaf-Mutism.*

It has always appeared to me that a study of the pathology of deaf-mutism should make the aural surgeon very humble. Elsewhere in surgery, pathological research has opened new fields for work, work characterized by daring operations and brilliant results. But in fronting deaf-mutism the aural surgeon soon feels that prevention is better than cure, in a very special sense. Nearly all he can do is to guide the teacher, helping him to understand the deaf mute, and to select his methods according to the latter's needs. In a very few cases hearing does develop somewhat and make speech possible—I mean speech resulting from the presence of hearing, not the speech of the orally taught but totally deaf child. This possibility should make the surgeon see that the best conditions are present in the naso-pharynx and tympanum; the former should be cleared of adenoid growths, and the latter freely ventilated. The hearing should be frequently and carefully tested, and if an "island" of hearing be found it should be exercised by the tones belonging to it in the gamut of sound. If these belong to the range of the human voice the speaking trumpet will be of use; if not, the corresponding tones will be found in the keyboard of the piano, or on the strings of the violin. The only other measure indicated is the removal of ceruminous collections and foreign bodies, where these exist, from the external auditory canal. It is not much the surgeon can do for the deaf mute, but it is well that that little be based on common sense lines. It is very unlikely that the day of brilliant promise and disappointed hope is over for the deaf mute.

*3. Regarding the Prevention of Deaf-Mutism.*

After these rather sad reflections it is quite refreshing to turn to this third question—the prevention of deaf-mutism. I have been accused in somewhat high quarters of fathering harsh and revolutionary proposals in this connection. Now, I plead for common sense and the absence of sentiment in talking about this subject. The philanthropy which pities and makes matters worse is doing harm all round; but although it is doing frightful harm among the deaf the discovery of that harm is difficult, for its workings are subtle. I do not blame the workers, for they seldom know of the harm they do. Curiously enough the proposals I am about to make were received with favour by the deaf themselves, and by their teachers at a recent conference, but were described as execrable by the leading members of a learned society, very few of whom have any practical experience amongst the deaf.

I am, of course, about to speak of those born deaf. When a child is born deaf, and particularly when two or three children in a family are born deaf, it is generally the expression of a tendency of which further evidence can be got by taking an extended view of the family history. Perhaps the parents hear, and even the grandparents, but further back in the line of ascent, or amongst the collateral branches, deafness can be found. Often our view is so limited that we do not find it. But if we could all trace our family history to the Conqueror's time we would oftener succeed. Here is a bad but typical example taken from the "Sheffield Evening

Telegraph and Star" of June 26th, 1896 :—"At an inquest yesterday on William Earnshaw, fifty-nine, a St. Pancras saddler, it was stated that the relatives could not identify the body, as the wife and sister were blind, deaf, and dumb, and that the four children were deaf and dumb. The deceased was deaf and dumb, and was so when he married."

Now, if children like those above referred to were let alone they would probably not marry. Philanthropy—and it is not mistaken here—might see that they were fed and clad, and even educated, and made a use of. But that they would marry early in life, or even marry at all, is improbable. Early in the lives of such children, however, they are sent to school under a Compulsory Education Act. Philanthropy has provided splendid institutions where even weakly children become physically fit boys and girls, and, when these leave school, philanthropy again gathers them together in missions and practically marries them to their like. Could anything more complete be devised for the propagation of congenital deafness? Now, if I could I would prohibit such people marriage. That is the "execrable" proposal. Interference with marriage is always dangerous and is bound to give rise to certain evils, but the State has devised or encouraged a system which makes for the intermarriage of the congenitally deaf. It is the duty of the State, therefore, either to correct these evils belonging to the system, or to discontinue its encouragement. Practically, all efforts fall under one of two heads: (1) preventive and (2) repressive measures.

Mr. Graham Bell suggested both repressive and preventive measures. He thought the former inadvisable, and preferred the latter. Mr. Bell's principle in formulating these preventive measures is "the retention of the normal environment during the period of education." Small day schools, in which the oral system was to be taught, the association of the deaf with the hearing, and, in a general way, the avoidance of the segregation of the deaf—both during the school and the after-school period—these were the means by which the intermarriage of the deaf was to be prevented. I regret to state that evidence is now coming from America that these measures will be entirely insufficient, if, indeed, they will have much effect at all.

Mr. Fay tells us that the experience of the last twenty-seven years shows that, whilst the measures classified by Dr. Bell as preventive may have a little, they are not having much effect in diminishing the tendency which deaf mutes show to marry one another; and he finds the reason for the failure of these preventive measures "in the deep feeling of fellowship, affinity, kinship, sympathy, which has its roots in the similarity in the condition of the deaf"—a feeling which operates in spite of any modification of educational methods, and even without any education at all. "Community of feeling breaks down the barriers that parents and teachers have taken so much pains to erect, sympathy grows into love, and love results in marriage."

In spite of this disappointing report, I think effort in this direction should be continued. In addition, the deaf themselves should be carefully instructed in the bearing which the principles of heredity have on their case. I am assured by some of those who manage the deaf that

instances now occur of deaf mutes abstaining from marriage because of the risk of a deaf progeny.

In speaking of repressive measures Mr. Bell suggested that the marriage of persons belonging to families containing more than one deaf mute should be prohibited. This might be made the basis of useful legislation, but as two cases of adventitious deafness sometimes occur in the same family before the age when speech is acquired, great injustice would be done to the hearing members of such a family were the suggestion enforced.

The recurrence of deaf-mutism in two or more generations would form a safer basis. It should be remembered that were prohibition to be applied it must include the hearing members of badly tainted fraternities, for these are as capable of producing deaf mutes as their deaf brethren. On the other hand it should be remembered that such prohibition would include only a small number of badly tainted fraternities, for recurrence in the pronounced form indicated would be detectable only in a few families, but these are responsible for a large number of deaf mutes.

Any action involves enormous difficulty. I am trying rather to establish a principle than to formulate a plan. Any action ought to be preceded by full and careful inquiry. The principle is as follows :—

*It is the family tendency to deafness rather than the presence of deafness in the parents which determines the appearance of deafness in the offspring. Parents transmit deafness not because they are deaf, but because and in the degree in which they represent family deafness.*

It remains only to indicate the effect of consanguinity of the parents in the production of deaf progeny. If there is the slightest tendency to deafness, consanguinity will as certainly accentuate this as it does any other family feature. Amongst the deaf, or for that part of it amongst the hearing, I would most strongly discourage consanguineous marriage.

There is a clear field for immediate action in the prevention of acquired or adventitious deafness. And, fortunately, this field is already well occupied. Sanitary science is at war with those diseases, the exanthemata, which cause so many cases of deaf-mutism. Measles, however, is so common a cause of loss of hearing that its compulsory notification is indicated. The rôle of syphilis in the production of deaf-mutism is not well defined. Dalby thinks that next to scarlet fever and measles, syphilis ranks as the commonest cause of acquired deaf-mutism. This statement may be true, but, so far as I know, it has not been proved by any extended observation. Amongst one hundred and twenty-seven children at the Glasgow Institution the dentist there found only two cases of typical syphilitic teeth. When in the course of acute disease in childhood, ear discharge is noted or pains in the ear complained of, such signs and symptoms should be carefully treated, and the more fully equipped student of to-day will, doubtless, do this better than his less fortunate predecessor.

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## OTITIS MEDIA SUPPURATIVA CHRONICA. CEREBRAL ABSCESS.

### OPERATION. RECOVERY.

By WILLIAM MILLIGAN, M.D.

INTRACRANIAL abscesses, secondary to suppurative middle ear disease, have, during the last few years, been frequently dealt with successfully by surgical measures. The notes of the following case, although presenting nothing of an unusual character, are, perhaps, worthy of record.

M. C., a female, aged twenty-five, had suffered for many years from chronic suppurative inflammation of the right middle ear. The discharge had not at any time been profuse, but had always been exceedingly foetid. As the result of exposure she contracted a severe head cold. The ear became exceedingly painful, the pain being at first located to the depths of the meatus, but gradually spreading over the right side of the head.

At this time she was seen by her family physician, Dr. Brown, of Manchester, who found her complaining of severe pain in the head, and of tenderness over the right mastoid process. The temperature was 101° Fahr., the pulse about 100, and the respirations from 20 to 22 per minute. Examination of the ear showed a scanty purulent and foetid discharge, almost complete loss of the membrane, and a few granulations springing from the tympanic mucosa. Leeches were applied around the ear, and afforded a certain amount of relief. The pains, however, gradually increased in severity, and the patient lay in bed in a semi-comatose condition. When summoned to meet Dr. Brown in consultation, the patient was found lying in bed with limbs slightly drawn up upon the abdomen, and complaining intensely of pain in the head, more especially over the right parietal region. The least pressure, and especially percussion over this area, greatly increased the patient's distress. The tongue was thickly coated, the abdominal walls flat and retracted, and the bowels markedly constipated. Great intolerance of light was complained of. The temperature was 101.6° Fahr., and the pulse 104. Cerebration was very sluggish. Examination of the ear showed an almost entire absence of membrane, and the usual evidences of chronic suppurative middle ear disease. The pupils were equal and reacted to light. No optic neuritis was present.

Owing to the serious state in which the patient was, immediate removal to hospital was advised, and was carried out the same day. On admission the temperature was 100° Fahr., the pulse 104, and the respirations 26. A dose of calomel was ordered, and ice bags were applied to the head. This treatment gave considerable relief, the pain being distinctly lessened.

During the next few days, however, the temperature gradually fell, as also did the pulse rate and the respiration rate.

From a careful consideration of the history of the case and of the symptoms present a diagnosis of temporo-sphenoidal abscess was made and operation advised. It was agreed, however, to open the mastoid process first and examine carefully for any fistulous track which might show the path of propagation to the interior of the cranium. The patient was accordingly put under chloroform, and the mastoid, antrum, the attic, and the roof of the middle ear carefully exposed and examined by means of a limelight search apparatus. No fistulæ were, however, found. Owing to the collapsed state of the patient at the end of this examination it was decided to postpone opening the cranial cavity. The patient was accordingly put back to bed, warm bottles were placed round the body, and weak warm brandy and water was given internally. Two days afterwards the patient was again put under chloroform—very little, however, being used owing to her continued weak and collapsed condition. At this time the temperature was 97·4° Fahr., the pulse 60, and the respirations 16. The scalp was rapidly reflected around the ear and all bleeding points at once ligatured. A disc of bone was now removed one and a half inches behind and above the centre of the external auditory meatus (Reid's base line). Upon its removal the dura at once bulged into the opening, and no pulsation of the brain was visible. A small opening was now made through the dura and a pus searcher driven directly into the temporo-sphenoidal lobe. After having penetrated the cortex for about half an inch pus oozed out. In all about three drachms of intensely fœtid dark-coloured and thick pus escaped. A rubber drainage tube was at once slipped into the abscess cavity, which was then thoroughly irrigated with a warm solution of boracic acid. The head was then dressed in the usual way. The patient made an uninterrupted recovery, the tube being removed upon the fourteenth day. When seen a few days ago—now five months after the operation—perfect healing was found, both as regards the wound in the head and as regards the cuticularization of the cavity formed by throwing the middle ear, the external meatus, the attic, and the antrum into one. The patient's general health is now excellent, and she is able to carry on her work—that of a hard-working and busy dress-maker.

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### THREE INTERESTING CASES OF FOREIGN BODIES IN THE AIR PASSAGES.

By H. P. MEYJES, M.D.,

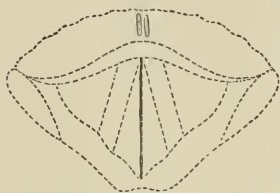
Private Lecturer at the University in Amsterdam.

QUITE recently I had another proof of the danger incurred by the feminine custom of putting pins and needles into the mouth.

When eating (!), Miss B., aged twenty-one, had put a needle into her mouth, which, by the motion she made when swallowing, entered and fixed itself in the larynx.

At once the patient felt a stinging pain about the larynx—chiefly at the right side. In the greatest trouble, the patient and her friends called for medical assistance. It was stated that there was a needle in the larynx; and the patient was told to come and see me, in order to have the *corpus alienum* extracted. A few hours after the accident the patient appeared before me. Present state was as follows: the patient is somewhat nervous, but is speaking in the normal way, complains of stinging pain in the throat, and points with her finger to the right cartilago thyroidea.

The respiration is normal—somewhat superficial; there is no dyspnoea present; but every motion made in swallowing causes the pain to increase. Upon examination by means of the laryngoscopic mirror,



I found that the rather thick sewing needle had fastened itself exactly sagittally in the larynx—between the anterior commissure on one side and the cartilagine arytenoidæ on the other. In phonation the vocal cords are quite close to the needle, whilst the mucous membrane, near the wounded point, is somewhat swollen and red. As the length of the

needle was supposed to be three centimètres, I was quite aware that the extraction would present some difficulties, as, by repeated swallowing, the end had deeply penetrated into the tissue.

I thought of a somewhat similar case I saw, some time ago, in Schmitzler's clinic at Vienna. The swallowed needle ran from behind, at the right to the left, somewhat over the rima glottidis, leaving the vocal cords untouched. The reactive inflammation—probably caused by resultless efforts to extract—prevented the extraction *in toto* of the needle, of which only one centimètre was visible. The needle—which, happily, chanced to be rather thin—was, with some pains, cut in two in the middle of the free part, and both parts were extracted—the one after the other. Considering the difficulties connected with this mode of operation, I wanted to try first, if possible, to extract the needle *in toto*.

I tried to make out in what direction the point of the needle was; and I thought I might suppose that the somewhat thinner part was in the direction of the back part of the larynx. After cocainization of the pharynx and larynx with a ten per cent. solution, and directed by the laryngoscopic mirror, and by means of a strongly curved long forceps with oblique action, I took firmly hold of the needle in the middle; and, in order to disengage the thicker upper end, I pressed it deeper back into the tissue, and was happy to produce it at once *in toto*. The patient's spasmodic motions had not given me any difficulty, as the taking and extracting of the needle had been done almost in one single *tempo*. Precautionally, I showed the whole needle complete, both to the patient and her friends, as the sensation that remains for some time after the presence of *corpora aliena* in the air passages very often causes patients to believe there is still something sticking.

Now I could perfectly discover the two holes the needle made, and which were straight opposite the one to the other. By rest and anti-phlogistics the cure was soon completed, and there remained no paræsthesia.

The number of cases when patients have swallowed some object or

another is rather great, and we are often astonished when seeing the really exceptional position of the *corpus alienum*. So of late I extracted a fish-bone which was almost strung to the mucous membrane of the right cartilage arytenoidea. The reaction had become already very important, and the voice was hoarse, as, in consequence of the swelling, a complete adduction of the vocal cords was not possible.

I thought the above case interesting enough for communication, especially by reason of the very peculiar position of the needle, both the ends having pierced the tissue, total absence of dysphonia, and the particular difficulties that may now and then complicate such kinds of extractions.

Another analogous case, of somewhat different character, brought the patient in great danger of his life.

A man aged thirty-five got a fish-bone in his throat and applied to me for assistance. The most scrupulous examination did not allow me to find even the slightest appearance of any *corpus alienum*. A week afterwards I was sent for by the patient, who for some days was suffering from heavy oppressiveness, together with heightened temperature and fœtid expectoration. The patient was in a state of the utmost exhaustion. At once I supposed an abscess was forming itself, caused by the *corpus alienum*. Upon examination, by means of the laryngoscopic mirror, I discovered what follows :—Exactly over the entrance to the larynx, and almost entirely obstructing the opening, there is a tumour as large as a hen's egg, beginning from the back side of the pharynx and covering a great part of it. Upon digital examination the tumour appears to fluctuate, and the exploring finger was covered with thin and very fœtid pus. Directed by the laryngoscopic mirror, the abscess is split up and down over the whole length, about four centimètres, which causes a mouthful of stinking pus to be spat out. At further examination no fish-bone is found. The patient has a quiet night ; the next morning he has no fever, and in a week he is completely cured. So thus the patient was for some days in danger of his life ; firstly, as by the increasing extent of the abscess the entrance to the larynx was by-and-bye closing, and, secondly, as a spontaneous breaking of the abscess would probably have caused an infectious inflammation of the lungs. We may suppose the fish-bone to have been very small, and by swallowing to have entirely penetrated into the tissue, as upon first examination the top of the finger did not find any protuberance on the pharynx.

From this case I saw how important it is, if the result of any first examination should prove negative, to repeat the examination for some time, even daily.

That *corpora aliena* lodged in the throat may readily cause a fever and fœtid expectoration, I found by a third case, where a lady of forty-five, when eating chicken soup, got a bone in the throat. As she was very nervous, and had previously, without any special reason, repeatedly complained of itchings in the throat, her complaints were considered to be of very little importance. After three days she had a fever, fœtor *ex ore*, and heavy irradiate pain in the right upper arm. The physician prescribed salicylas natricus, as he thought she had an attack of rheumatism. The difficulty in swallowing continued. Then the patient was

directed to me, and a laryngoscopic examination made by me found an object about two and a half centimètres, which had fastened itself in the tissue near the ligamentum glosso-epiglotticum lateral dextrum.

After the extraction, which was not over difficult, the pain in the arm ceased immediately, and after a few days also the fever and the *fœtor ex ore*.

The *corpus alienum* appeared to be a little bone of a chicken, which, by having been for a rather long time fastened in the throat, had already caused an important reactive inflammation.

The most interesting character of this case was the heavy irradiate pain in the upper arm—a symptom which, indeed, is very rare, and which may be of importance for the diagnosis, if there is any *corpus alienum* present.

## SOCIETIES' MEETINGS.

### TWELFTH INTERNATIONAL MEDICAL CONGRESS, MOSCOW.

*Second Day's Proceedings.—21st August, 1897.*

(Continued from page 549.)

Dr. GLEITSMANN in the Chair.

#### *Cancer of the Larynx.*

Prof. CHIARI based his "Report on the present position of the Diagnosis and Treatment of Carcinoma Laryngis" on the statistics and writings of others, and on seventy cases under his own observation. On twelve of these he had performed partial extirpation and on some others endolaryngeal operation. As Dr. Catti had undertaken to discuss diagnosis thoroughly, Chiari confined his remarks principally to the histological diagnosis and to treatment. With regard to microscopical examination, if the clinical appearances were in favour of cancer a negative histological result was of no value; but a positive microscopical result—provided the examiner was a competent experienced man—should always outweigh all negative clinical appearances. Several cases from his own experience were here cited in support of this view. Chiari next dealt at some length with the differential diagnosis between cancer and papilloma, pachydermia, tuberculosis, and syphilis, the general conclusion being that the only thoroughly reliable diagnostic method was microscopic examination.

*Treatment.*—One must consider first whether the patient is in a condition to stand a severe operation; second, whether there is hope of removing the whole of the diseased tissue. Endolaryngeal operations are, from a therapeutic point of view, of extremely doubtful value even when the disease is of small size and circumscribed. On the other hand, excision of portions of the growth for microscopic examination, in order to establish

the diagnosis, is perfectly justifiable, because as a rule the growth of the tumour is not hastened thereby. Nevertheless, as this effect—viz., rapid increase in the growth of tumour—sometimes follows on partial excision, one should always be prepared to carry out the radical operation as soon as the diagnosis is established.

The typical operations for laryngeal cancer are laryngo-fissure, and partial or total extirpation of the larynx. The best results are obtained by the first method, when it is necessary to remove only a vocal or false cord, for the operation is not dangerous in itself, and it generally results in the restoration of free respiration and a good voice. Moreover, the patient is not compelled to wear a tube. Statistics from Sendziak and Schmiegelow support these statements. Chiari has three successful cases of his own. The results of extirpation of half the larynx are not so good, because the patient, as a rule, must wear a tube, deglutition is often interfered with, besides the operation is more dangerous in itself. The results of total extirpation are still worse than those of partial extirpation. As a rule these operations should be undertaken only in intrinsic laryngeal cancers. Infiltration of glands to any extent makes the prognosis very bad.

All these facts show the immense importance of early diagnosis of laryngeal cancers; only in the very earliest stages can one hope to produce a permanent and complete cure. In inoperable cases tracheotomy should be resorted to when stenosis exists, and again when the obstructing growths can be removed endolaryngeally.

#### DISCUSSION.

Dr. L. BAR (Nice) complimented the gentlemen who had opened the discussion. He wished to report a case of malignant tumour of the larynx which occurred in a tubercular subject. A lady, sixty-nine years of age, who had been suffering for a time from pulmonary tuberculosis, came for consultation with regard to the larynx. A neoplasm of the ary-epiglottidean folds was detected, non-peduncular and giving the appearance generally of malignancy. Three months later there was infiltration of the folds. The disease progressed steadily until asphyxia threatened, and the patient died ultimately from the disease, having refused to allow any surgical interference.

Prof. KRAUSE (Berlin) said that in spite of all the distinguishing marks described by authors for the diagnosis of cancer, it was impossible to diagnose it in the very early stages by laryngoscopic examination. With increasing experience, indeed, one's opinion became more reliable, but the only thoroughly reliable method of diagnosis was the histological. A piece of the tumour must be excised, and that not superficially but going deeply into the cord, or wherever the suspected growth was seated. Clinical diagnosis was seldom permissible in the early stages, whereas certain results ought to be obtainable even in the very earliest stages from microscopic examination. He cited a case in which the peculiar uneven white appearance, regarded as typical of carcinoma, was markedly present, but which microscopic examination proved to be merely a deposit on and infiltration of the substance of the vocal cord with fibrine. He agreed with Dr. Catti that carcinomata of the posterior wall of the

larynx were seldom confined to the larynx, but as a rule spread to it from the pharynx.

With regard to treatment, he could not agree with Chiari as to the value of laryngo-fissure. The results were seldom permanent ; after some time, varying in different cases, recurrence took place. He had had fourteen of his cases treated by total extirpation, with only one death. The method adopted consisted in total extirpation of larynx, stitching the end of the trachea to the skin in front, and completely shutting this off from pharynx by tampons and stitching the mucous membrane.

Dr. HAJEK (Vienna) said intrinsic and extrinsic carcinoma of the larynx were to be put into two totally separate categories. Intrinsic carcinoma was a comparatively simple disease on account of the very poor supply of lymphatics to the larynx. On the other hand, extrinsic carcinoma was one of the most malignant of diseases. The most difficult positions in which to diagnose carcinoma were the pyriform sinus and the posterior wall of the larynx. A very limited carcinoma in either of these positions might set up such an extensive perichondritis as to be completely hidden by the same. He cited two cases he had seen in which this had occurred. Microscopic examination in the early stages often gave such uncertain results that no information was gained. A positive result could always be trusted, but a negative result was of value only when confirmed over and over again. As to differential diagnosis, there was seldom any difficulty in distinguishing between carcinoma and tuberculosis. In the latter one did not find that coarsely lumpy surface so characteristic of the former. There was greater difficulty in diagnosis between carcinoma and syphilis ; indeed the latter was often to be excluded only by anti-syphilitic treatment. Again, pachydermia could seldom be mistaken for cancer. Pachydermia as a rule occurred on the posterior parts of the vocal cords, whereas cancer occurred on the anterior portions. Pachydermia was almost always bilateral, but cancer unilateral. The lazy limited movement of the vocal cord so much spoken of in cancer was not a trustworthy symptom, because it was often absent in cancer, and just as often present in pachydermia. Much more valuable was the fact that pachydermia appeared to laryngeal examination to be a growth on the cord, while a commencing carcinoma did not appear as a growth at all, but rather as an undefined thickening of the cord itself, of which one could not say where it began and the healthy cord ended.

Dr. SPENGLER (St. Petersburg) spoke in favour of the use of para-chlor-phenol in cases of inoperable cancer of the larynx. It was not to be rubbed into the growth as in treating tuberculosis, but to be lightly painted on. It was a strong but non-irritating antiseptic ; under its use foul ulcers became clean, and the *factor ex ore* diminished correspondingly. At the same time it had a marked anæsthetic action, relieving the patient from much of his suffering. Chelidonium also gave very good results.

Dr. CASTEX (Paris), in discussing laryngotomy and laryngo-fissure, spoke of the danger of chloroform in these operations. He had a very unfavourable opinion of chloroform in all operations for malignant disease in the throat. He strongly advocated exploratory thyrotomy, and also partial resection of the cartilages, as we must always remember that

in spite of favourable laryngoscopic appearance the disease might have spread laterally on to the œsophagus or even to the thyroid gland. He quoted one case in which after removing the whole larynx it was found that the disease involved a large piece of the œsophagus.

Dr. ROSENBERG (Berlin) said pain shooting up to the ear on the affected side had been mentioned as one of the common symptoms of carcinoma laryngis. He considered it of no value as aiding diagnosis, except in the very earliest stages, when it occurred with long intermissions. Limited movement of the cord he thought more common in pachydermia than in cancer. More characteristic than limited movement he considered lazy movement of the cord. As a rule pachydermia was easily diagnosed, but he had seen a case in which pachydermia had so closely resembled carcinoma as to leave the diagnosis doubtful for a long time. He thought that too much importance had been attributed by other speakers to the histological diagnosis of carcinoma. The microscope often leaves us in doubt, and when it does so we must trust to the history and the clinical appearances. He had had one case in which a portion of a growth was submitted for examination to three capable pathologists, with the result that three different opinions were expressed as to its nature. As to differentiating between carcinoma and syphilis by iodide of potassium, that required long watching—about a month any way—as it was well known that carcinoma often improved markedly under the action of K. I. Rosenberg thought that in spite of statistics there were still cases in which endolaryngeal operation was to be preferred to other methods. To explain and support this view he quoted the case of an old man in whom carcinoma laryngis was diagnosed and operation advised. After getting along moderately well the patient finally—three years after being first seen—consented to operation. Resection of the larynx was performed, and the patient died within a few days. Rosenberg thought that had his sufferings been simply relieved by endolaryngeal operation he might have gone on living much longer, as it was evident from his history that the tumour was of extremely slow growth.

Dr. HERYNG (Warsaw) discussed microscopic diagnosis. Negative results were valueless. Thus in one case he removed a piece of tumour, and had it examined; it was reported to be fibroma. Not being satisfied he cut out a second piece as large as a hazel nut; again reported fibroma. Shortly cut out a third large piece, which was again reported fibroma. Lastly, being still unconvinced, he extirpated half the larynx, with a considerable piece of adjacent pharyngeal wall. Examination showed this to be exquisite typical carcinoma. As to treatment, the chief points Heryng touched on were to warn against the use of chromic acid, and still more of galvano-cautery, in these cases.

Dr. WEIL (Vienna) reported an interesting case, in which four times a piece had been cut out and examined microscopically with negative results. Iodide of potassium was then given, with, for a time, very satisfactory results, but in the end the case proved to be one of cancer.

Dr. GLEITSMANN (New York) thought that within the last few years no special progress had been made in diagnosis, but that on the other hand treatment had advanced considerably.

Prof. CHIARI and Dr. CATTI replied.

*Afternoon Meeting.*

Dr. JOHN MACINTYRE (Glasgow). *The Use of the X Rays in Diseases of the Nose, Throat, etc.* (Abstract.)

*Introduction.*—Consideration of results obtained, and what may yet be expected.

*Apparatus.*—Description of, including: (*a*) source of current with special rheostat for street mains; (*b*) coils; (*c*) condensers; (*d*) various interrupters, vibrators, mercury, electro-motor, mechanical, etc.; (*e*) Crookes' tube, form of, vacua of, shifting electrodes, cathodes, method of keeping latter from heating; (*f*) stands, cryptoscopes, fluorescent screens, special screens for mouth, face, neck, and cavities of the face, etc.

*Principles involved to obtain:* (*a*) definition; (*b*) penetration; (*c*) rapid or instantaneous photographs and brilliant fluorescents on screens.

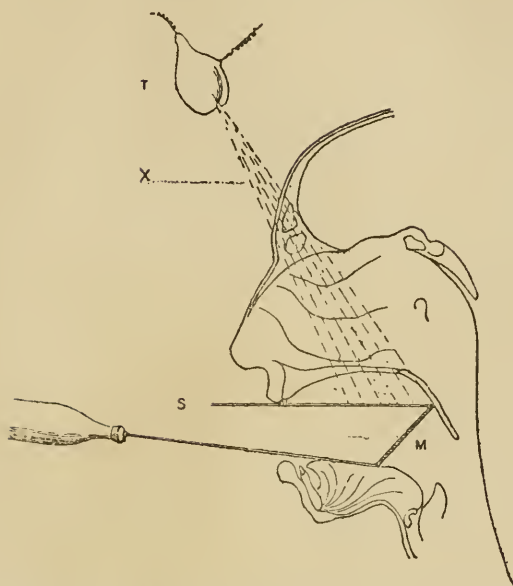
*Parts* photographed or seen on shadow on the fluorescent screens: bones and cavities of the face, larynx, the spine and cervical and thoracic regions, cavities of the thorax with contained viscera, heart, and blood-vessels, etc.

*Fluorescent Screens and Photographs.*—Comparison of methods with advantages and disadvantages of each, and indications where each may be best employed; crystals; to obtain best results on the screen; principles involved in obtaining sharp definition and great penetration, and also the photography of objects with the omission of certain parts lying in the vicinity which we may not wish to photograph or see; special apparatus devised for examination of the nose, oral, pharyngeal, and laryngeal cavities, by means of the fluorescent screens. (*See Extract, "Archives de Laryngologie."*)

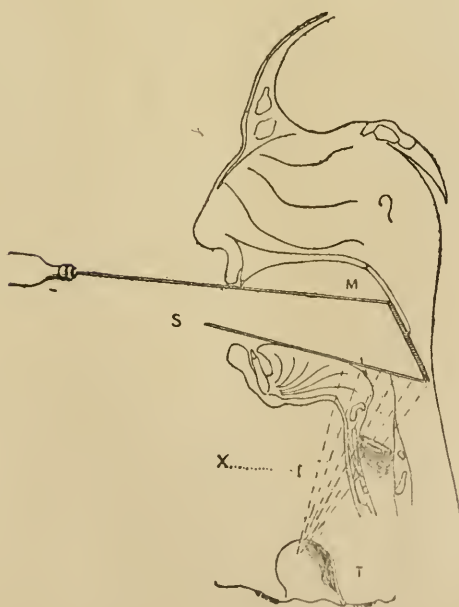
*Pathological conditions* in the special department in which the rays have been found of value:—(1) Foreign bodies in antrum of Highmore, larynx, mouth, and œsophagus. (2) Injury: fracture of hyoid bone, superior maxillaries, etc. (3) Tumours—(*a*) jaw; (*b*) destruction of upper maxillary bone from malignant disease, aneurism in chest, etc. (4) Thorax: fluid in pleural cavity, deposit in apex of lungs, etc. (5) Various: other conditions, such as ossification in cartilage of larynx, anatomical specimens of internal ear, inside cranium, mastoid, etc.

Demonstration of photographs of the above were shown, also methods of employing screens in the mouth for the antrum, etc., as also description of method of employing fluorescent screens. Amongst others the following:—(1) Dr. Macintyre's installation, showing rheostat, coil, various interrupters, and mercury pumps for exhausting tubes. (2) Foreign bodies in the region of the œsophagus, neck, etc. (3) Malignant disease, destroying bones of the upper jaw. (4) Photographs of the cartilages, tongue, and pharynx, as seen through the neck, the thorax in the adult and youth, and several photographs of same in early life showing development. (5) Photographs of the heart (normal), hypertrophy of ventricles in chronic and acute diseases. (6) Anatomical specimens of the internal ear, œsophagus, cartilages in the larynx, soft tissues of the larynx, etc.

Arrangements for seeing shadows in nose, mouth, neck, throat, etc., by means of fluorescent screens.



Inspection of Upper Maxillary Region, Nose, etc. M, Mirror; S, Screen; X, Rays; T, Tube.



Inspection of Laryngeal Region. M, Mirror; S, Screen; X, Rays; T, Tube.

J. MOUNT BLEYER, M.D. (New York). *An Original Research on the Fluoroscopic Diagnosis of Certain Forms of Lung, Throat, and Heart Disease, etc.*

In a long paper the author reviews the "early work in invisible rays," fluorescence, "the principles of vibrations," and the general physics of the subject. He discusses in some detail the various vacuum tubes, and remarks that it is very doubtful if the intensity of the fluorescence of a tube is any criterion of its ability to generate Roentgen rays. To obtain sharpness of detail the smaller the tube the better; there is no particular advantage in a large tube. The shape of the tube is of great importance, and a tinfoil cap is useful in preserving the tube. He makes the suggestion that as cathode rays are projected with great intensity from sharp points and edges, tubes should be constructed with cathode terminals armed with sharp points. His most interesting remarks are those upon his clinical experiments. In several cases of pleurisy he found the light area marking the apex of the thorax become more extensive as the effusion was absorbed. In three cases the opacity persisted at the apex, leading to the conclusion that there was condensation of the apex. Percussion and auscultation corroborated the diagnosis of tuberculosis. In a number of cases a tubercular deposit threw a shadow on the screen. In four cases light spots showed the existence of cavities, but in a number of others where cavities were diagnosed from auscultation, there was no confirmation by fluoroscopy. In a case of supposed incipient apical tuberculosis, where the physical signs were obscure and no bacilli could be detected, the fluoroscope showed one apex to be less permeable than the other. Subsequently tuberculosis became evident. In another case calcareous deposits in a lung were shown up beautifully. An intubation tube which had slipped into the trachea was discovered resting on the bifurcation. He has observed two cases where the screen showed the heart to have been displaced by old pleuritic adhesions, and one case of aneurism of the aorta. He claims that the screen furnishes evidence of equal value with that of percussion and auscultation. He concludes his paper with remarks upon the general management of radiography, and in order to show the different layers of tissue he advises under exposure of the plate and very slow development, weakening the developer as soon as the image becomes distinct, and a strong positive is seen on the back of the negative. He recommends equal parts of eikonogen and hydrokinone.

*Laryngitis Fibrinosa.* By Dr. ALBERT ROSENBERG.

On the 27th March, 1896, a hospital patient, sixty-seven years old, came into the University polyclinic for diseases of the throat and nose. He complained that he had suffered for a short time from a prickly pain in his throat, which had begun without constitutional disturbance, and which had gradually increased. Patient had never been ill before, and denied any infection. The examination showed an otherwise healthy man with rhinitis atrophicans, defect. septi narium fere totius, cicatrices pariet. post pharyng., concresc arcus pharyngo-palatin cum par. post pharyng., cicatrix margin epiglottidis.

The epiglottis is omega-shaped, bright red on the oral surface, and somewhat swollen; on the left side, near the pharyngo-epiglottidean fold,

there is a blood-red, round, superficial erosion in the mucous membrane. The remainder of the epiglottis is almost entirely covered with a thin greyish white membrane, and looks as if it was covered with a veil; towards the sides the membrane is thickened, overtops a little the level of the surrounding parts, and has a deeper, more intense, greyish white colour. This membrane stretches from the epiglottis to the right ary-epiglottidean fold, which it completely involves. The edge of the intense greyish white coloured parts is sharply contrasted with bright, in some places almost blood-red, surroundings. The pocket ligaments are swollen and red; the left shows, at its junction with the mucous membrane covering the arytenoid cartilage, a greyish white spot.

Further observation demonstrated on the epiglottis, and on the ary- or pharyngo-epiglottidean folds, sometimes here, sometimes there, or on several spots at the same time, a bright reddening of definite parts of the mucous membrane, which was followed on the next day by a greyish white fibrinous patch; removal of this with forceps was rather difficult, as it was firmly attached to the mucous membrane, and left a bloody eroded surface. These white membranes became gradually thinner, and later lay like a white veil on the mucous membrane, becoming thinner, finally vanishing, leaving behind in their place a bright red mucous membrane, which also became pale. The whole course of this progress took about eight days. The surrounding parts affected in the same way were very red in small zones.

Scarcely was the process better on one spot than it began in another, or if it was lessening on one spot it was developing in another, so that one could observe usually the different phases of development and convalescence alongside of each other, but always confined to the glottis; hardly a day passed in which the larynx was free. This increase and decrease of the local appearances affected the constitution only by the pain in swallowing; otherwise the patient felt well, and never had a rise of temperature. On the one hand, to determine the fibrinous nature of the membrane, and histological nature of the inflammatory process in the mucous membrane, and to differentiate it from a diphtheritic affection, I removed with forceps a piece of the affected mucous tissue with the membrane, and inoculated blood-serum twice with removed pieces. There developed no diphtheritic bacilli, nor were any visible in a prepared microscopic section, but, on the other hand, different strepto- and staphylococci. The mucous membrane was cut in serial sections, and coloured after Weigert's method; it showed fibrin infiltrating rather deeply into the mucous membrane, in which the mucosa was in a state of acute inflammation. It was, indeed, a fibrinous, not a diphtheritic, laryngitis. The duration of the disease, however, does not correspond to similar known cases. Since March, 1896, the patient has been under regular observation. We see the patient twice a week, and the appearance is to-day the same as it was a year and a half ago. The affection has been as yet little influenced by different local soothing, astringent, or caustic remedies, or by such internal remedies as iodide of potash, nor is the appearance altered by the cessation of general or local treatment.

As regards the etiology, nothing could be made out in his mode of life, surroundings, or business. These researches could be very definitely

made with a patient who had already lived for more than ten years in hospital. There has been no similar case in hospital during the whole time he had been under observation, nor one from whom infection was possible. Patient is a teetotaller and non-smoker.

The cicatrices in his pharynx point with certainty to a syphilitic history ; it is important that I point this out because another case, whom I had not the opportunity to observe *in vivo*, but from whom I have seen the specimen, had also syphilis. Here we had also to do with a chronic fibrinous laryngitis, which had especially affected the middle of the larynx.

The inflammatory appearance on the mucous membrane was in direct ratio to the severity of the existing irritation, and in reverse ratio to the resistance of the organisms of the affected individual. It is possible that here syphilis had still more diminished the power of resistance without taking into account the age of an already weakened organism. The other case referred to was an elderly individual.

Prof. CHIARI (Vienna) was of opinion that Dr. Rosenberg's case was most probably one of pemphigus ; he had seen similar cases.

Dr. MIDDLEMASS HUNT reported a similar case which had continued for about fifteen years. As the patient was an extremely neurotic lady he had been inclined to suspect, but had never been able to prove, that the irritation was probably kept up by the patient herself, by the application of carbolic or some such means.

## SECTION XII.A.—DISEASES OF THE EAR.

(Translated by DUNDAS GRANT and ATWOOD THORNE.)

Dr. RICARDO BOTEY. *Treatment of Attico-Mastoid Suppuration and Consecutive Intracranial Lesions.*

*Summary.*—The author believes that the conservative treatment of acute attico-mastoiditis and of suppuration of the attic is not sufficiently insisted upon. In the former preventive treatment may cure a mastoid complication, and extraction of the ossicles may arrest suppuration of the attic.

When the lesions are deep-seated, Koerner's method is made use of—not to all the retro-auricular wound, but only to the upper two-thirds—in order to avoid the formation of abscesses and fistulous tracks. When the lesions reach from one side to the other he makes use of Panse's flap, but he sutures the post-auricular opening before the skin has grown over the cavity—for, if it is done too late, the opening remains patent.

As an operative procedure in cerebral complications of otitis, the author makes use of an operation intermediate between Wheeler's mastoid operation and operations on the ear.

He opens the antrum at the seat of election ; then the tympanum ; next the squamous bone, at the junction with the upper border of the opening of the external meatus ; and, finally, the upper wall of the

meatus, to the depth of nearly a centimètre. This is sufficient for the complete exploration and drainage of the middle cerebral fossa.

In cerebellar lesions and phlebitis of the transverse sinus, nearly all the posterior wall of the antrum can be removed—for the danger of cerebral hernia is not great, as the nervous centres are protected by the internal layer of the dura mater, on the level of the transverse sinus.

Dr. LOUIS BAR (Nice). *Otomycosis.*

This disease of the external auditory meatus has been known to and studied by the most distinguished aurists—Wreden, Schwartze, Politzer. It is caused by the presence of a fungus (an aspergillus), which plays in it the part of a parasite—probably, a saprophyte. Wreden has not been able to demonstrate the inoculation of this parasite. Politzer, however, cites a very remarkable case of direct inoculation. Direct inoculations, which we have undertaken on guinea-pigs, have sometimes caused a slight swelling, with persistent induration. Probably a specific inflammation is required to develop the aspergillus—for a previous simple inflammation or the exudation or cicatrization of a cutaneous eruption is not sufficient, according to the result of our inoculations.

Treatment is based on the destruction of the spores, and is, at the same time, antiphlogistic and parasiticial. Experiments in a Pasteur's stove, at a steady damp temperature of 30°, indicate that the most effectual antiseptics for the destruction of the aspergillus are nitrate of silver, salicylic acid, tincture of iodine, and chloride of lime, in very small doses from one in one thousand to one in five hundred.

The false fungoid membrane must be removed from the external meatus; then irrigations of tepid chloride of lime solution (one in five hundred); to be followed at once with instillations of salicylic acid. If the case does not respond quickly to this treatment, it will be well to touch the canal either with nitrate of silver (one in ten) or tincture of iodine, and persevere with the above treatment. Relapses are frequent. The patient should avoid damp and dirt—both favourable to the development of otomycosis.

Dr. F. VASQUEZ GOMEZ. *Acute Inflammation of Adenoids in Adults.*

From the etiological point of view the predisposing and determining causes must be described.

Simple hypertrophy of this part of Waldeyer's ring is the commonest lesion.

Amongst the first are the existence of adenoid vegetations.

In Mexico we often find adenoid vegetations in adults, but their extent and their flatness on the surface of the naso-pharynx cause them to be unperceived unless a careful examination is made.

They are frequently in the lateral part of the rhino-pharynx, which causes their pathogenic action to affect specially the hearing.

Amongst the second—that is, the determining cause—we will mention (a) sudden changes of temperature, very frequent in Mexico—due probably to its elevation (2270 mètres) above the level of the sea—especially at certain seasons of the year. (b) Influenza affecting mucous localities favours the acute inflammation of adenoids. (c) Partial chills, especially

of the lower extremities. (d) Abuse of tobacco and spirituous liquors, also acute or subacute inflammation of the digestive system, with traumatic and other injuries. These have been the determining causes of inflammations of adenoids in the cases we have observed.

From the clinical point of view acute inflammation of adenoids in adults may be divided into circumscribed and diffuse. In the latter the phlogotic process extends along to the cavity of the tympanum or goes down to the oro-pharynx : hence there are three distinct forms—circumscribed, auricular, and pharyngeal.

The general symptoms vary with the intensity of the attack from simple neuralgia to fever, more or less severe, with its usual accompaniments. Sometimes there is an exaggeration of the reflex symptoms, which are frequent in the chronic forms.

The local symptoms are more important and vary with the form. In the circumscribed form there is a muco-purulent running from the nose and pharynx, sometimes swelling of the glands at the angle of the jaw, and, still more rarely, there is difficulty of nasal breathing.

In the auricular form there are repeated attacks of acute or subacute otitis in its various forms. If the patient has had a chronic purulent middle ear inflammation practically cured, pus appears with each attack of acute adenoiditis.

If the inflammation passes to the pharynx there will be acute pharyngitis, so common in individuals with this predisposition, and which is often accompanied with catarrhal bronchitis or slight laryngitis. Pain and redness of the affected part is common to all forms.

Thus, if we have repeated attacks of acute rhino-pharyngitis, of acute or subacute otitis, which relapses from the slightest cause, or of suppuration of the tympanum, for which no cause can be found, and which had ceased to suppurate for some time, we must then think of inflammation of adenoid vegetations.

Nasal obstruction, which helps the diagnosis so much in children, is not found in adults so frequently or so markedly. To make the diagnosis certain it is necessary to use both the anterior and posterior rhinoscope. This method of exploration enables one to appreciate the situation, size, and form of the adenoid vegetations. If the result of the examination is negative, one must seek another cause for the phenomena.

The best treatment for acute inflammation of adenoids is the extirpation of the vegetations. When that cannot be done, the action of the causes described must be avoided.

The therapeutic treatment of acute inflammation of adenoids in adults should be principally hygienic and medicinal. The latter produces excellent results, and there is less danger than in children.

Dr. EPHRAIM CUTTER. *Catheters for the Left and Right Eustachian Tubes and Handles of Probes.*

*Summary.*—It has been shown by observation that the Eustachian tubes form three angles of forty-five degrees.

1. Above a horizontal plane of the pharynx.
2. Outside to right and left of a vertical antero-posterior middle plane of the pharynx.

3. Behind the middle transverse plane of the pharynx.

It is clear that if these angular measurements are correct for the middle of the Eustachian tubes, catheters ought to accord with these angles. Access to the Eustachian tubes is easier by the mouth, behind the soft parts of the palate, than across the nasal fossæ or turbinated bones, lined with sensitive erectile cavernous tissue, the vomer deviated and arranged in an irregular manner—almost twisted—which are so many obstacles for working easily with the catheter.

If the operator is also a rhinologist he can by means of a speculum convince himself whether the catheter enters the Eustachian tube or not: the introduction of the catheter would then be controlled by sight.

The catheters are made in silver or other materials, and Figs. 4 and 5 show their construction. Fig. 6 shows the handle of a sound in hard wood for the left Eustachian tube. Turned round it serves for the right tube. One may hope that with this new instrument operators will reach more easily the openings of the Eustachian tubes than with the ordinary catheters.

Prof. J. Solis Cohen recommends that each patient should have his own catheter. These angles will not suit all cases, as it has been proved that the openings of the Eustachian tubes vary.

For example: Fig. 7 represents the posterior nasal fossæ; A, left nasal fossæ; B, right nasal fossæ.

1. Shows the most frequent position of the opening of the right Eustachian tube according to the observations of the author, as well as those of other observers.

2. Another situation for this opening.

3. Still another situation.

When one introduces the catheter by the mouth it is easy to adapt it to these variations, but it is impossible to do so when the catheter is introduced through the nasal fossæ.

The construction of angular catheters for the Eustachian tubes which the author endeavoured to introduce some years ago, was defective, inasmuch as it had not the angle of forty-five degrees turned upwards which the new pattern possesses.

Prof. V. COZZOLINO. *Antero-Lateral Mastoidotomy.*

*Summary.*—Difference between the method of the author and all others: new direction given to the gouge and to the director, which is used to prevent danger of penetrating the antrum.

Advantages of this method:

1. Certainty not to pass the temporal extra-auricular line.
2. Less resistance to overcome in the bony zone.
3. This zone being nearer the antrum and collateral cell, the aditus ad antrum is reached more directly.
4. With this method it is more difficult to damage the intratympanic organs, the Fallopian canal, the transverse sinus.

Demonstration and conclusion.

*The Surgery of the Fallopian Canal, of the Opening of the Stylo-Mastoid Foramen in the Otitic Paralysis of the Facial Nerve.*

The otitic etiology of numerous paralysis of the facial nerve which are called rheumatic or peripheral.

Frequency of. Due to the paralysis of the seventh pair in its intratympanic and inferior peripheral branches in the middle ear, acute pyogenic maladies, and in the chronic forms in which, anterior or posterior, the bony plate of the Fallopian canal is affected. The rational surgical treatment to relieve the different parts of the intratympanic Fallopian canal from the compression which nearly keeps up the paralysis of the facial nerve of otitic origin.

Different operative proceedings. When the pressure is on the epi-tympanic portion of the canal, which is the usual seat of pressure, or on the mastoid or styloid portion.

Utility of the galvanic current to confirm the diagnosis of paresis or of paralysis from pressure.

Cases in which this diagnostic means may deceive. It has only a relative value as a therapeutic agent. The duty of the physician to consider the middle cavities of the ear in all cases of peripheral paralysis of the facial nerve.

Demonstrations and conclusions.

*Dr. HEIMAN (Warsaw). On the Treatment of Otitis Media Purulenta and on Pyæmia of Otitic Origin.*

From his experience of cases of otitis purulenta, complicated by cerebral symptoms or by affections in which one might expect opening of the mastoid process to cure the disease, but which, nevertheless, end in death—further, considering the incertitude of the diagnosis in these cases, having often found purulent foci in the cranial cavity when he had not expected them—the author proposes a method of treatment that he has adopted for several years in all cases of purulent otitis media, with fever and pain in the occipital region, when even the usual remedies do not rapidly lead to a cure and when the symptoms do not depend on retention of pus.

This method consists in not limiting the operation to the opening of the mastoid process, but in proceeding to open the cranial cavity and uncover the lateral sinus (when necessary) and aspirate the same. If the result is positive, the sinus must be freely laid open and the thrombus cleared out. Puncture is used only as a diagnostic method, all the symptoms of a thrombosis being uncertain. Opening the cranium has good effects, even when no morbid foci are found, because it alters the intracranial tension and facilitates absorption of morbid products by the blood. He admits that this method has been described by others who have used it (Koerner, Lane, Mauriac, Broca, Brieger), but he arrived at it independently. His operation differs from that of the others in this—that he opens the mastoid process, the cranium, and the sinus at one sitting. Since adopting this method he has had no cases of diffuse meningitis, and the mortality of these complications has decreased from 1:387 to 0:287. He further considers that the cerebral troubles caused by inflammation of mastoid or middle ear—often held to be reflexes—are

true complications, with their basis in the cranial cavity, and which often cease of themselves either before or after opening of the mastoid cells.

The fear of causing a general infection by puncturing the sinus he holds to be exaggerated, if only one carries out aseptic precautions, because generally an infection exists already.

In ten cases of puncture and three of accidental wound of the sinus he had only one bad result, but in this case the patient died four and a half weeks after the wound of sinus—*i.e.*, he died of a secondary infection. Therefore the fear of producing by puncture a thrombus of the lateral sinus which will lead to a general infection is unfounded, if one remembers the conditions under which an artificial thrombus can be produced.

Avoiding lavage of the wound and applying a partial suture greatly influence the good results.

From these observations he is of opinion that clinically we must distinguish pyæmia with from pyæmias without thrombosis, thus agreeing with Koerner, Hessler, and Brieger, but contradicting Jansen and Leutert.

Another point in favour of this division is the negative result of puncture and aspiration of the sinus. Pyæmias without thrombosis have a fairly good prognosis; those with thrombosis almost invariably end fatally unless early operated on.

According to Heiman, pyæmias with thrombosis arise in most cases from those without thrombosis, especially in those cases in which the infective centres or the conditions favouring absorption of infectious matter by the blood have not been removed, and in those cases in which micrococci and toxins act for a long time on the sinus, whether they produce inflammation of its walls or not. Pyæmia with thrombosis can develop, however, as such from the very beginning.

*Résumé*—Heiman arrives at the following conclusions:—

1. The diagnosis and treatment of fatal complications of otorrhœa presents many weak points.

2. In cases of otitis media purulenta without retention of pus, if there are general symptoms, such as fever, debility, etc., or local symptoms referable to the brain, opening of the cranial cavity is indicated besides opening of the mastoid process.

3. Opening of the cranial cavity is of great use, even in those cases in which one does not find the expected morbid products. It diminishes the intracranial pressure and alters the conditions of absorption of infective material.

4. Where thrombosis of the sinus is suspected one must aspirate the sinus after opening the cranial cavity. This is of the utmost importance for diagnosis, and in most cases decides whether further operation on the sinus is required or not.

5. Exploratory puncture, and even incision into the sinus, can be done without any fear of producing general infection if only aseptic precautions are adopted, and can do no harm whatever where symptoms of infection exist already.

6. From the clinical standpoint we must distinguish two forms of pyæmia—*viz.*, pyæmia with and pyæmia without thrombosis. From the therapeutic standpoint the former is the more important.

7. Pyæmia with thrombosis generally arises from pyæmia without

thrombosis. Both forms grow worse if the centres of infection in the organ of hearing, and still more in the cranial cavity, are not removed early, or if the conditions favourable to absorption are not suppressed. The progress of either form often depends on the time at which absorption of infective material commenced.

8. Pyæmia without thrombosis has, as a rule, a favourable termination after suitable treatment—often, indeed, without any treatment. Pyæmia with thrombosis almost always ends in death, but a certain number of cases can be saved by operation.

9. It is often difficult to choose the right moment at which to operate in these fatal complications, especially in cases of general infection. When we can wait without danger to the patient, it is well not to hurry, but rather to watch and make sure of the diagnosis. Threatening symptoms, on the other hand, always demand energetic surgical intervention.

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## BRITISH MEDICAL ASSOCIATION'S MEETING,

*Montreal.*

*September 1st, 2nd, and 3rd.*

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### SECTION OF LARYNGOLOGY AND OTOTOLOGY.

DR. GREVILLE MACDONALD (Lond.), *President.*

*(Specially reported by W. PERMEWAN, M.D., F.R.C.S.)*

#### DISCUSSION ON TURBINOTOMY.

Opened by GREVILLE MACDONALD, M.D., President of the Section.

Gentlemen,—Removal of larger or smaller portions of the turbinated bodies has been practised more or less by us specialists ever since, I imagine, we first encountered those cases where the operation would obviously cure the patient of whatever symptoms might be attributable to such hypertrophy. But yet it is only quite lately that the word "turbinotomy" has become one of frequent use. And this indication of an enlarging interest in the subject inclines one to ask the questions, first, whether such operations are now performed in cases where formerly milder measures appeared to suffice; secondly, whether our patients are more expeditiously cured, and whether there is any possibility of too great an operative zeal resulting in actual harm to the patient.

I am excluding from my remarks all operations on the middle turbinal, seeing that it is not usual to admit this structure when using the word "turbinotomy," and also because it would lead us into regions too vast to be even prospected in the time at our disposal.

Resection of the inferior turbinal in part may be required (1) for the relief of obstruction to respiration; (2) for the relief of the various neuroses; and (3) for the relief of a very troublesome and rather uncommon form of catarrh.

For such affections or symptoms, removal of those large cauliflower, corrugated, or muriform masses, occupying more especially the anterior and posterior extremities of the bone, has been among the earlier triumphs

of rhinology. For the grosser of such hypertrophies, the incandescent or cold snare have always been the chief methods adopted for operation ; while the smaller are sometimes sufficiently reduced, if not eradicated, with the electro-cautery point.

There are cases where specialists of not very wide experience may fail to give all the relief they had hoped for by such methods. This generally arises from the fact that they overlook the large masses often concealed in the concavity of the overhanging bone. We sometimes see enormous masses in this region which can be shelled out, so to speak, with a probe, and either cut off with scissors or removed piecemeal with the snare. The latter is often preferable on account of the relatively small amount of hæmorrhage it entails. I am somewhat anxious to emphasize this concealment of the much-hypertrophied tissue for the sake of recording my experience that in all such cases—and I have had my share of them—a cure can be effected without interfering with the bone ; and I suspect it is in such cases, where the real difficulty is overlooked, that the danger may arise of considering it necessary to remove large portions or the whole of the inferior spongy bone.

Hypertrophy of the erectile tissue, moreover, has appeared to me to be more often associated with asthma than are other affections of the nose. And, correspondingly, the prognosis of hay fever and paroxysmal sneezing is better where the objective trouble is inferior turbinated hypertrophy than any other disease. So that for this reason alone it is incumbent on us to inquire into every method advocated for the relief of the obstruction in the inferior meatus.

But there are undoubtedly cases where the snaring or cauterizing of the mucous membrane is not sufficient to ensure the desired relief. In such, respiration through the fossæ is not necessarily obstructed, although, of course, it may be, and the specialist's attention is often drawn to the condition only by the accumulation of ropy mucus or muco-pus in the inferior meatus, which the patient experiences the greatest difficulty in removing from the nose by the ordinary methods. He is constantly wiping the nose, being unable to blow the accumulations into the handkerchief. The mucus, in fact, is imprisoned in the concavity of the inferior turbinal, as well as in the portion of the inferior meatus internal to the turbinal, by the relatively large size of the overhanging bony structure. The free border of the spongy bone may lie almost or quite in contact with the floor of the nose, and in a few cases we see adhesion of its anterior part to the floor beneath. This may result in the formation of a pocket with or without a small opening in its anterior portion. Into such a pocket the patient is constantly forcing the accumulations of mucus in his endeavours to clear the nose, the result being that he is never free.

In most of such cases, I believe, the fault lies in a structural malformation rather than a pathological condition. Just as in the many and extraordinary malformations of the septum with which we have so often to deal, the fault appears to have originated in a sort of error of co-ordination in the relative extent to which the septum and the vertical diameter of its containing chamber have arranged for their individual extension, so the inferior turbinal appears to have attained a size which would have

been suitable only in a nasal fossa with a greater vertical capacity. But I have never seen any case where the bony structure appeared to be too large in the posterior regions of the fossæ, any more than deviations or hypertrophies of the septum are to be found in the regions brought into view with the post-rhinal mirror.

In these cases the only treatment that can be considered satisfactory is the paring off from the free border of the bone of as much of its substance as will secure a free passage of air and mucus. This can usually be attained with scissors, or the combined use of scissors and snare as practised by Dundas Grant. But it is only the anterior portions that ever need such treatment in my experience; and I have never seen any case where it was necessary to do more than this. I have never been tempted to remove large portions of the inferior turbinal, beyond the masses of hypertrophy with which we are all so familiar. And although I have heard the views of those who advocate the larger operations on the inferior turbinal for the relief of obstruction to respiration, or for the removal of certain neuroses, yet while amply convinced of the feasibility of such operations and of the relief they may afford; while even admitting that no appreciable harm may result; yet let me repeat, I have for my part not seen the cases where the desired relief could not be acquired by milder measures. The great hæmorrhage, and the frequent necessity for plugging, render the operation graver than almost any other in the nose. And we have yet to see whether, in the course of a few more years, we shall not encounter in these patients definite evidence of chronic inflammation of the larynx, etc., resulting from the removal of what may be justly described as the most important organ of the nose.

In a series of experiments<sup>1</sup> made some years ago by myself, more especially with a view of ascertaining the degree of moisture and temperature of air after passing through the nasal fossæ, among other things I was able to show that the amount of moisture exhaled was diminished approximately to one-third or less after the application of cocaine, and the collapse of the inferior spongy body. Although this was only what one would expect, it adds weight to an impression pretty generally held that to the inferior turbinated body must be ascribed the most important function of the nose. Hence one may say that to remove this structure *in toto*, for the sake of restoring nasal respiration, must be paradoxical in the extreme, seeing that, from the physiological point of view, little or nothing can be gained thereby.

For a last word, let me repeat that although it is frequently necessary to remove hypertrophied portions of the mucous membrane from both posterior and anterior extremities of the inferior turbinal, I have never yet seen a case where one could dream of gaining anything by the total ablation of this important structure.

Dr. LINCOLN (New York) was agreed as to the advisability of removing as little of the bone as possible. When something more was required than galvano-cautery, ignipuncture, or the snaring of hypertrophied

<sup>1</sup> "On the Respiratory Functions of the Nose and their Relations to certain Pathological Conditions." 1889.

masses, he employed the surgical trephine; or in other cases he dissected off the mucous membrane, and cut off the edge of the bone with bone scissors. He did not recommend the knifeshare, as he thought it an inaccurate instrument.

Dr. BRYSON DELAVAN (New York) was of opinion that the use of the so-called "spokeshave" was quite inadmissible in nasal surgery; we already had more accurate and safer methods, and he would like to hear the ultimate history of cases of complete removal. The desideratum was the maximum of relief with the minimum of destruction.

Mr. CARMALT JONES contributed some remarks on the after effects of turbinotomy. It had been done first to relieve tinnitus aurium, and that symptom had been relieved in sixty per cent. Mouth breathing had been cured, the sense of smell improved, and anæmia had disappeared. In children inability to suck had been cured. There was always hæmorrhage, but it was generally easily controlled, and secondary hæmorrhage was rare. Suppuration in the ear occurred rarely. No death had followed the operation.

Mr. LENNOX BROWNE thought that it was wiser to treat the cases for which turbinotomy was advocated by milder means, and in children especially he would never perform it. He suggested that many of the cases of catarrh for which it was performed were really cases of Tornwaldt's disease. He emphasized the fact that spurs or septal deviations were present in most cases of hypertrophic rhinitis, and required treatment.

Dr. DALY (Pittsburg) had removed turbinates in children with the happiest results, but agreed that it was rarely required. It was necessary to remove so much of the turbinates as would secure free breathing—any more was wrong.

Dr. CHARLES WARDEN was of opinion that attention to the septum would often obviate the necessity of operating on the turbinal bodies.

Dr. PERMEWAN, like Drs. Delavan and MacDonald, objected to the word "spokeshave." It suggested operating on inanimate structures—an idea which dominated many rhinologists. He thought the complete operation was very rarely required, and was pleased to see the conservative spirit in nasal surgery more marked than at Bristol in 1894.

#### DISCUSSION ON THE SIGNIFICANCE OF LARYNGEAL PARALYSIS.

This was opened by Dr. DALY (Pittsburg), who said that paralysis of the laryngeal muscles might be due to lesions in the brain, the nerve nuclei or the nerve trunks, or to hysteria. There had been shown to be a cortical centre in the frontal operculum, apparently better differentiated on the right than on the left side. Cortical paralyses were rare, but depended on hæmorrhage, softening, or inflammation. Nuclear paralysis occurred mostly in chronic degeneration of the nervous centres. Trunk paralysis was much more common than the others, and it was due to pressure on or injury to the nerves, or to a neuritis—*e.g.*, the neuritis caused by diphtheria. Hysterical paralysis was often bilateral, but it might be unilateral, and might be combined with contracture of opponents. The question as to the cause of abductor paralysis was still unsettled, but he was inclined to agree with the view of Bosworth that, though pressure on the recurrent nerve

might cause it, there is also present in these cases some pathological condition in the medulla.

Mr. LENNOX BROWNE remarked that diphtherial paralysis was much more common in adults than in children. In right recurrent paralysis, as Mandl had indicated, there was generally apical mischief, pulmonary or pleural. As to hysterical aphonia, he thought it was often a premonition of structural change in the brain.

Dr. SHURLEY (Detroit) said that the fact had been established that there were two centres in the medulla and brain respectively, one presiding over the automatic, the other over the voluntary movement of the larynx. As to so-called hysterical paralysis, the diagnosis and the prognosis was often most perplexing, and such cases were really often due to actual brain disease.

Dr. DELAVAN (New York) said that in right recurrent paralysis apical disease could seldom be demonstrated by physical examination, but was often seen *post mortem*. He had reported two cases of right recurrent paralysis, apparently caused by intralaryngeal diphtheria.

Dr. PERMEWAN was of opinion that the most frequent cause of organic laryngeal paralysis was syphilis, either from the direct effect of gummatous deposit, or by its inducing nuclear or neuritic disease. Bilateral paralysis was generally due to central disease, but he had seen a case due to pressure on both recurrences. He believed in the existence of hysterical paralysis, but it was important to distinguish these cases from those in which aphonia was only one symptom of complete paralysis.

#### DISCUSSION ON THE ULTIMATE RESULTS OF OPERATIONS ON THE MASTOID IN SUPPURATIVE EAR DISEASE.

This was opened by Dr. BULLER (Montreal), who said that there were two classes of cases requiring operation on the mastoid.

First, cases of purulent infiltration, occurring generally in the course of acute purulent disease of the middle ear, and more often in adults than in children, without actual death of the bone.

Secondly, cases of more chronic character, in which there was also caries or necrosis of more or less of the temporal bone.

The first class of cases invariably, in his experience, did well after operation, and hearing often completely recovered. The second class were more uncertain in result: it depended on the extent and amount of bone disease, and in operating it was most important to remove the whole of the diseased bone, care being taken not to injure important structures, of which the chief was the facial nerve. Of these cases the most unfavourable were those due to strumous disease. He emphasized the fact that mastoid operations, far from being of a trivial character, often required the greatest surgical skill for their thorough performance.

Dr. A. H. BUCK (New York) divided cases into acute and chronic. The former nearly all did well. Prognosis in the latter depended on the thoroughness with which all diseased bone was removed. Bone of a high degree of vascularity, and in which there was stasis, should be removed, and granulation tissue in the pneumatic cells showed that the structure

of them was diseased. It was important to have a large enough field of operation and a good light.

Dr. CLARENCE BLAKE said that the same rule obtained in mastoid operation as in all other surgical procedures—namely, to remove all inflamed tissue which is presumably incompetent of recovery. He often secured primary union of the external wound by allowing the cavity to fill with blood-clot and suturing the wound.

Dr. WARD COUSINS said that the object of these operations was to remove diseased tissues and provide drainage, and the removal of large portions of the cortex of the mastoid was often a good procedure. He had never operated on a case in which he considered it advisable to close immediately the mastoid wound.

Dr. GRAHAM BACON remarked that temperature did not always fall immediately after operation ; but one need not be discouraged by that. He believed that intracranial complication would be often found if carefully looked for.

Mr. HUGH E. JONES confined his remarks to chronic cases, and he had always performed the Stacke-Schwartz operation. No fatal result had occurred : facial paralysis had occurred four times, but two of these recovered completely. To avoid injuring the facial nerve, it was very important to have free opening and a good light. As regards hearing, the majority had been definitely and some greatly improved, though the improvement sometimes disappeared as the wound cicatrized. Pain was always relieved, and the discharge had in most cases practically stopped. It was not to be expected, however, or desired, that a cavity lined with mucous membrane should become entirely dry.

Papers were read on the following subjects :—

*A Contribution to the Study of the Anatomy of the Fronto-Ethmoidal Region.* By T. H. BRYAN (Washington).

The author described the fronto-ethmoidal cells which lie between the frontal sinus and the ethmoidal cells proper, and which are often affected in disease of the frontal sinus. The relation also of the infundibulum to the maxillary antrum was of much importance. Instead of terminating in the meatus, the infundibulum in many cases opened right in the foramen of the antrum, and thus inflammatory products were directed into the antrum from the frontal sinus.

*The Relation of Nasal Disease to Pulmonary Tuberculosis.* By FLETCHER INGALS (Chicago).

This was an elaborate statistical inquiry based on more than fourteen thousand cases. The results seemed to show that instead of predisposing to pulmonary tuberculosis, nasal catarrh, if it has any influence, appears to prevent it. This antagonism was not surprising in view of the fact of the occurrence of hyperæmic conditions in nasal disease, and of profound anæmia in tuberculosis. The only possible exception may be found in atrophic rhinitis, though in this disease the occurrence of tuberculosis may only be a coincident effect of the general lowering of nutrition and health.

*The Physiological and Pathological Relations between the Nose and the Sexual Apparatus.* By Prof. J. N. MACKENZIE (Baltimore).

This relation was shown physiologically by the occurrence of nasal symptoms synchronously with menstruation, the occurrence of vicarious nasal menstruation, the nasal phenomena which accompany sexual excitement, and the occasional dependence of genito-urinary irritation on affections of the nasal passages. Pathologically it is shown by the aggravation of nasal affections during menstrual periods, the production of nasal catarrh by excessive sexual indulgence and by masturbation, and the occurrence of cases of nasal disease which resist treatment till co-existing disease of the generative organs has been cured.

The paper was illustrated by a wealth of classical learning which it is impossible to reproduce.

*The Correction of Nasal Deformities by Subcutaneous Operations.* By JOHN O. ROE (Rochester, New York).

The author pointed out that the great object to attain in operating on nasal deformities was to restore symmetry. To do this and to avoid external wounds it was best to operate from the interior of the nose. It was necessary to secure complete antisepsis, to study the plan of the operation with great care, and to follow a painstaking course of after-treatment. Illustrations of many excellent results were shown.

*Recent Progress in the Surgical Treatment of Malignant Disease of the Larynx.* By BRYSON DELAVAN (New York).

After a review of the recent work of Sendziak, Semon, Butlin, and others, the author proceeded to discuss many points of the highest importance.

The early diagnosis of malignancy was essential, but was difficult. Microscopical appearances were sometimes misleading, as was also evidence derived from the position of the growth and the degree of mobility of the cords.

The question of preliminary tracheotomy was one of great moment. The author concluded that it was necessary, and, from various considerations, should be done not less than ten days before the major operation. In this way there was less shock, the patient got used to the tracheotomy tube before the serious operation on the larynx, and the thyrotomy was rendered easier. So, too, there was less risk of septic pneumonia, and the patient's condition improved after the tracheotomy, relieving him, as it did, from dyspnoea and imperfect aëration of the blood. The operation ought not to be undertaken except by an operator skilled in surgery, as it would otherwise fall into discredit.

*Chronic Interarytenoid Laryngitis.* By PRICE-BROWN (Toronto).

The author described five cases of chronic laryngitis in which the swelling was limited to the commissure. He raised the question as to whether they were a distinct type of disease, or whether they were to be classed as pachydermia on the one hand, and tubercular laryngitis on the other.

*A Case of Foreign Body (Metallic Shoehorn) removed from the Larynx by Thyrotomy.* By C. H. KNIGHT (New York).

This was a report of a case in which attempts had been unsuccessfully made to remove the foreign body by the aid of laryngoscopy, and by Kirstein's method of autotomy. Thyrotomy was done six weeks after the impaction of the shoehorn—which caused no symptoms but aphonia—and the foreign body removed. Aphonia lasted some weeks after the operation, but eventually quite disappeared. Only the lower half of the thyroid cartilage was divided, together with three rings of the trachea.

*Acute Syphilitic Stenosis of the Larynx; Intubation; Recovery.* By J. O'DWYER.

In a patient with acute œdema in the course of tertiary syphilis, O'Dwyer inserted a large intubation tube seven-eighths of an inch in diameter at the head, and allowed it to remain for ten days, when the obstructive symptoms quite disappeared. Intubation was more difficult in the adult than the child, but it may be done in some cases by the aid of the mirror. In many cases of phlegmonous inflammation the mouth could not be opened wide enough to allow the introduction of the mirror.

*The Non-Operative Treatment of Chronic Suppurative Disease of the Antrum and Vault of the Tympanum.* By ALBERT H. BUCK (New York).

While agreeing in the necessity of mastoid operations in many cases, there were still many in which a patient course of antiseptic treatment was sufficient, especially in private cases. This treatment consisted in removal of all *débris*, and in the careful disinfection of the tympanum by injection of hydrogen peroxide. Solutions of this drug both acted chemically, and also, by effervescing in contact with the decomposing material, mechanically removed the secretions.

*The Operative Treatment of Mastoid Disease.* By CLARENCE J. BLAKE (Boston).

The author gave the result of thirty-six consecutive cases of mastoid operation during three months' service at the Massachusetts Eye and Ear Infirmary. He classed them under five heads:—

1. Those which healed by first intention, the walls of the mastoid being left intact and the cavity allowed to fill with blood. There were five of these, all acute and all in adults, and they all completely recovered.

2. Eighteen cases which healed slowly by granulation, the walls of the mastoid being left intact. Ten acute cases did well, and of eight chronic cases four were well three months after operating, and four were still under treatment.

3. Nine cases in which the dura mater was exposed. Six acute and three chronic. Of the acute cases one died of meningitis, and one of measles; one was well in three weeks and one in five, and two were at present convalescent in the out-patient department. Three chronic cases were still under treatment.

4. Three cases of extra-dural abscess, all of which were discharged well within six weeks of the operation.

5. Two cases of cerebral abscess, both of which recovered.

*A Case of Mastoid Disease with Sinus Thrombosis; Evacuation of Sinus and Ligature of Internal Jugular Vein; Recovery.* By F. BULLER (Montreal).

This was a report of a typical case, which recovered quickly after operation.

*Phosphor Necrosis of the Temporal Bone.* By H. D. WURDEMAN (Milwaukee).

A man, working in a match factory, contracted necrosis of the jaw; later on there was pain in the mastoid, and a sinus was found in the posterior wall of the meatus. The mastoid was operated on, but two years afterwards the caries still persisted, and great sclerosis of bone had taken place. There seemed to be no doubt of the causation in this case.

*Some Points in Anatomy which have a Practical Bearing upon Operations on the Temporal Bone in Diseases of the Ear.* By Dr. MORSE (Boston).

This paper, illustrated by specimens, photographs, and diagrams, gave a comparative account of the dangers of the Schwartze and Stacke operations respectively. It was pointed out that in the Stacke operation there was risk of injuring the lateral sinus, the facial nerve, the stapes, tendon of the stapedius muscle, and the horizontal semicircular canal. The Schwartze method was therefore to be preferred where possible, but in some cases the groove of the sinus came so far forward that there was absolutely no antrum, and in these the Schwartze operation was impossible.

*Eucaine as a Local Anæsthetic in the Surgery of the Throat, Nose, and Ear.* By W. JOBSON HORNE and MACLEOD YEARSLEY.

The authors found that eucaine was a satisfactory and safe substitute for cocaine. For examinations, a four per cent. solution was enough; and for operations, an eight per cent. to ten per cent. It must be applied directly after wiping away all mucus and *débris*. Anæsthesia lasted fifteen to twenty minutes, and there were never any toxic effects from the drug.

## AUSTRIAN OTOLOGICAL SOCIETY.

*Second Annual Meeting of Austrian Otolologists, Vienna, June 27th and 28th, 1897.*  
 ("Monatschrift für Ohrenheilkunde," July, 1897.)

(Continued from page 565.)

(Translated and abridged by Dr. DUNDAS GRANT.)

President—Prof. ADAM POLITZER.

Dr. MARCZEL FALTA. *Atresia of the Eustachian Tube.*

After referring to the cases of complete closure of the Eustachian tube described in literature, Dr. Falta narrated a case under his own observation.

The patient was a girl aged sixteen, who came to him in September, 1896, complaining of noises in her ear, and, on being asked if her hearing was at all dull, she denied it. On examination it was found, however, that the hearing distance for the watch in the right ear was three one-hundredths; for Politzer's acoumeter, one and a half mètres; whispered speech ("Messer"), three mètres; Rinné, negative; and bone conduction for high and low tones increased.

On the left side the hearing for the watch was five one-hundredths; the acoumeter three mètres; whispered speech ("Fenster"), four mètres; Rinné, negative; and bone conduction increased and Weber lateralized to the right side. On the right side the external ear was normal; the membrane was slightly indrawn, of a pearl-grey colour, with a light cone of normal size and shape, but divided into two parts; and there was a second smaller light cone on the membrane of Shrapnell. The whole membrane was uniformly transparent, and the long process of the incus distinctly visible.

The Eustachian tube on posterior rhinoscopy was not easily seen, on account of the narrowness of the space, and even with the help of cocaine it was difficult to get a view of the flat tubal swelling and the greyish red diminished pharyngeal orifice. The catheter passed through the nose with ease; but it was with difficulty, although with absolute certainty, that it was introduced into the ostium of the tube. An attempt, however, to force air through, either with weak or violent pressure, was absolutely in vain. The Eustachian bougies could be pushed in only two or three millimètres beyond the top of the catheter, as there was a firm mass obstructing the way; and it was impossible by any manipulation to push the bougie further into the passage.

On the left side the conditions were practically the same, and one description will apply to both ears.

The naso-pharynx presented all the signs of an old-standing hypertrophic catarrh. Politzer's method of inflation produced neither a subjective nor an objective reaction, but during vigorous use of Valsalva's method the vessels along the handle of the malleus became injected, though without there being any other change brought about in the remainder of the drum membrane or of the light cone. The injection described was attributed to the hindrance to the circulation induced by the effort. Under Siegel's speculum there was a limited degree of movement of the membrane, but more outwards than inwards. Experiments were made with a manometer in the external meatus, and it was found that while neither the catheter nor Politzer's method produced any movement of the fluid, that certainly took place on the vigorous use of Valsalva's method, care being taken that the teeth were firmly pressed together, so that the results might not be disturbed by any movement of the lower jaw. There was found no rise of the fluid, but on the other hand a lowering, and this result was no doubt due to the action of the tensor tympani. Other evidences of the action of this muscle were afforded by a noise in the ear taking place during swallowing and gaping. An opportunity was taken of judging of the effect of contractions of the tensor tympani upon the hearing, and it was found that they produced a

diminution of hearing, both for the deep and for the high tones of tuning-forks, indicating that the ossicles took part in the conduction of deep as well as of other tones.

As regards the etiology, reference is made to the different possible causes ascribed by various authors, such as syphilis, diphtheria, inflammation of the middle ear, new growths, and osteitis; but in this case the cause seems to be an inflammation of the naso-pharynx, which occurred in connection with an attack of pneumonia when the patient was ten years of age. There was always, however, a degree of trouble in connection with the nose. There was great probability that the epithelium had broken down in places, and thereby the walls of the tube had become adherent.

Treatment is only called for when the hearing is very considerably diminished, or when the noises in the ear are very severe. The introduction of sharp instruments would be very risky on account of the proximity of the tube to the carotid artery, and such surgical treatment would be only justifiable when it was certain that the adhesion was limited to the pharyngeal opening, or the obstruction was of a membranous nature. It has also been suggested to open a way through the mastoid process for the air into the drum, but this is a somewhat serious undertaking and might bring on very unpleasant complications quite out of proportion with the results which we desire to obtain. The easiest method is to perforate the membrana tympani, but the maintenance of a permanent opening has not yet been made possible.

A case of Dennert's was quoted in which the nasal passages were completely closed, as also the two Eustachian tubes. Repeated myringotomy was practised and during fifteen years an opening remained, with considerable improvement to the hearing although there was a secretion of mucus. Reference was also made to Dr. Alt's case, who, while syringing liquid vaseline into the drum, unintentionally perforated the membrane, but brought about considerable improvement of the subjective symptoms. Prof. Grüber carried out similar steps intentionally with similar result.

Dr. Falta would not operate in the present case unless the hearing became very defective, under which circumstances he would perform myringotomy, then possibly remove the malleus and incus.

The usual symptoms of atresia of the tube are extreme indrawing of the membrane, secretion in the middle ear, notable diminution of hearing power, tinnitus, feeling of fulness in the ear, and autophonia. With the exception of noises, which were not continuous, all the other symptoms were absent.

There was no doubt some air in the tympanum, and the question arose as to how a fresh supply got in when that already contained was absorbed. Dr. Falta considered it unquestionable that it found its way in through the membrana tympani by osmotic action.

Dr. GOMPERTZ recommended for the purpose of diagnosis the perforation of the membrane and the inflation of air through the Eustachian tube.

Dr. ALT narrated a case in which inflammatory stenosis of the tube, amounting for some days to atresia, had taken place in a caisson worker,

in whom the condition seemed to have been brought about by the negative pressure. Complete closure persisted for several days, and was so extreme that neither by means of Valsalva's nor by any other method of inflation could the slightest quantity of air be driven into the middle ear.

Dr. FALTA, in reply, recalled the fact that the patient had been under observation for nine months, and every form of treatment had been tried, except paracentesis, which he did not think justifiable as long as the hearing power was good.

Prof. GRUBER. *A New Angular Handle for the Surgical Electro-Motor in operations in the deeper parts of the Ear.*

The instrument is bent at an angle of 120 degrees, so that it can be used under the control of the eye. The movement is conducted by means of two cog-wheels. Various tips can be adapted to it, among others some small trephines, with which pieces of bone could be removed from the epitympanic wall in the same way as by means of Prof. Politzer's burrs; but it is more easily handled on account of the bend in the instrument.

Dr. ALT. *On the Etiology of Diseases of the Sound-Perceiving Apparatus.*

He pointed out the danger of having the literature of the subject overwhelmed with reports of the rarest affections of the sound-perceiving apparatus, while the simpler and commoner ones were left unreported.

Since the foundation of the Austrian Otological Society he had demonstrated before it several interesting illustrative cases, including one of deafness from mumps, one of Ménière's disease occurring in the course of sub-acute nephritis, one of alcoholic polyneuritis with disturbances of hearing, which were attributable to an alcoholic neuritis of the auditory nerve; further, apoplectiform diseases of the labyrinth in caisson workers, one of psychical deafness, one of disease of the labyrinth due to excessive use of salicylic acid, one of a fracture of the base of the skull passing through the labyrinth, one of leucæmic infiltration of the auditory nerve, characterized during life by the occurrence of deafness and Ménière's symptoms, in a patient suffering from myelolienal leucæmia, and, finally, hæmorrhages, experimentally produced in the labyrinths of animals by exposing them to a very high air-pressure which was suddenly removed. In order to find out the exact frequency of diseases of the perceptive organs in comparison with the conducting, Dr. Alt has made use of the annual reports accessible to him for the last ten years, along with the reports of Prof. Gruber's clinic from the year 1890, making in all a total of 182,779 cases. He had himself, from the 1st January, 1896, to the 15th June, 1897, examined into all cases of disease of the perceptive apparatus out of a total of 8910 out-patients under Prof. Gruber. Divergencies in the arrangement of the matter by different writers depended upon the following circumstances, namely, that in some annual reports diseases of the labyrinth secondary to suppurative or non-suppurative affections of the middle ear, when they fall short of necrosis of the labyrinth, are not noted, while in Vienna this is found to be a comparatively frequent coincidence. Again, many

authors include, under diseases of the inner ear, all cases of tinnitus without impairment of hearing. It is, of course, difficult to find a place in any other section for these affections, but this form of tinnitus does not indicate any disease of the labyrinth, but may arise from the most various causes. Similarly, some authors classify all cases of Ménière's complex of symptoms among diseases of the internal ear, whereas it has been frequently insisted upon in this Society that only a small number of them ought to be so classed. Varieties also occur from deaf-mutism being included in some reports and omitted in others.

The average percentage of diseases of the perceptive apparatus out of all diseases of the ears is as follows, according to the various authors :

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Habermann.....out of 5,051 ... 2'6 % | Lemcke .....out of 543 ... 4'9 %   |
| Gruber....., 42,736 ... 3'07 ,,      | Gradenigo ..... , 4,663 ... 6'5 ,, |
| Gottstein....., 2,726 ... 3'2 ,,     | Bürkner ..... , 100,000 ... 6'6 ,, |
| Cozzolino ..... , 543 ... 3'2 ,,     | Siebenmann ... , 397 ... 10 ,,     |
| Schwartz ..... , 10,192 ... 3'25 ,,  | Bezold....., 4,867 ... 12'6 ,,     |
| Bürkner ..... , 10,086 ... 3'7 ,,    |                                    |

Giving a total out of 182,799 of 5'42 per cent.

As regards the proportion of males and females out of the total number, it was as 70 : 30, but out of Alt's own cases as 63'71 per cent. to 36'29 per cent. As regards age, the general statistics showed 71'6 per cent. over fifteen years, and 28'39 below fifteen years, while Alt's observations in different periods of life give the following results :

|                            |                                    |
|----------------------------|------------------------------------|
| 1 to 5 years ..... 14'13 % | 30 to 40 years ..... 16'93 %       |
| 5 ,, 10 ,, ..... 7'13 ,,   | 40 ,, 50 ,, ..... 10'37 ,,         |
| 10 ,, 15 ,, ..... 7'13 ,,  | 50 ,, 60 ,, ..... 10 ,,            |
| 15 ,, 20 ,, ..... 12'06 ,, | 60 ,, 70 ,, and over ..... 2'75 ,, |
| 20 ,, 30 ,, ..... 19'31 ,, |                                    |

The left ear was affected in 25'9 per cent. of cases, the right in 19'2, and both in 54'9.

As regards etiology, Bürkner enumerates the following causes in his statistics from the year 1890 on :

|  |                            |
|--|----------------------------|
| Unknown Diseases of the Brain...23'3 % | Salicylic Acid ..... 2 %   |
| Traumatism.....10 ,,                   | Quinine ..... 2 ,,         |
| Syphilis ..... 7 ,,                    | Trade Noises ..... 1'5 ,,  |
| Scarlet Fever ..... 7 ,,               | Hydrocephalus ..... 0'7 ,, |
| Diphtheria ..... 7 ,,                  | Apoplexy ..... 0'6 ,,      |
| Typhus (Typhoid) ..... 5'3 ,,          | Epilepsy ..... 0'6 ,,      |
| Meningitis ..... 4 ,,                  | Variola..... 0'5 ,,        |
| Mumps ..... 2 ,,                       | Malformations ..... 0'5 ,, |

The reports quoted (with the exception of those of Prof. Gruber's clinic) give the following causes :

|                            |                                       |
|----------------------------|---------------------------------------|
| Unknown .....42'6 %        | Meningitis ..... 3'4%                 |
| Traumatism .....12 ,,      | Hysteria and Neurasthenia .... 2'2 ,, |
| Trade Noises .....10 ,,    | Typhus ..... 2'2 ,,                   |
| Syphilis .....10 ,,        | Fracture of the Base ..... 2'2 ,,     |
| Scarlet Fever ..... 4'4 ,, | Measles ..... 1'3 ,,                  |

|                  |       |                         |               |
|------------------|-------|-------------------------|---------------|
| Congenital ..... | 1 %   | Variola .....           | } each 0.18 % |
| Marasmus .....   | 1 "   | Cerebral Tumour .....   |               |
| Influenza .....  | 1 "   | Multiple Sclerosis..... |               |
| Diphtheria ..... | 0.6 " | Salicylic Acid .....    |               |
| Apoplexy.....    | 0.6 " | Leuchæmia .....         |               |
| Quinine .....    | 0.6 " | Pertussis .....         |               |
| Anæmia .....     | 0.6 " | Icterus .....           |               |
| Nephritis .....  | 0.5 " | Toxhæmia .....          |               |
| Puerperium ..... | 0.5 " | Erysipelas .....        | }             |
| Tabes .....      | 0.3 " | Lightning Stroke .....  |               |
| Alcohol .....    | 0.3 " |                         |               |

Dr. Alt attaches the greatest value, however, to the observations which he personally made and controlled in Prof. Gruber's clinic, including a total of 42,736 cases, which give the following :

|                              |        |                               |               |
|------------------------------|--------|-------------------------------|---------------|
| Unknown Causes .....         | 30.3 % | Diphtheria .....              | 1.7 %         |
| Trade Noises .....           | 14.8 " | Mumps ..                      | 1.03 "        |
| Combined with Non-purulent   |        | Combination with Retino-      |               |
| Disease of the Middle Ear... | 8.9 "  | Choroiditis .....             | 1.03 "        |
| Meningitis ..                | 7.2 "  | With Retinitis Pigmentosa ... | 0.58 "        |
| Congenital Defect .....      | 6.89 " | Alcohol .....                 | } each 0.34 " |
| Acquired Syphilis .....      | 5.4 "  | Quinine .....                 |               |
| Typhus .....                 | 4.8 "  | Salicylic Acid .....          |               |
| Suppurative Disease of the   |        | Nephritis .....               |               |
| Middle Ear.....              | 4.4 "  | Variola .....                 |               |
| Hereditary Syphilis .....    | 3.1 "  | Erysipelas .....              |               |
| Cretinism and Hydrocephalus  | 2.4 "  | Multiple Sclerosis .....      |               |
| Scarlet Fever .....          | 2.06 " | Fracture of the Base ...      |               |
| Traumatism .....             | 2.06 " | Lightning Stroke .....        |               |

Dr. KAUFMANN was struck with the high percentage of cases due to trade noises, but he was quite in agreement with it, as he found it very frequently in his own practice.

Dr. POLLAK had observed the same in his capacity of medical officer of clubs, and had found Bezold's continuous tone range a test of great value.

Dr. ALT thought that a large number of the cases ascribed to unknown causes in reality belonged to the category of trade diseases. We only thought of a limited number of trades in regard to such affections, whereas many workmen outside of them were exposed to similar injuries.

Dr. VICTOR HAMMERSCHLAG. *A Contribution to the Study of the Function of the Cochlea from a developmental point of view.*

His studies were directed towards two of the most important hypotheses, namely, that of Helmholtz, which distinguished two functions separately localized—the one in the cochlea for the perception of musical tones, the other in the vestibule and ampullæ for the perception of noises. The other hypothesis was that of Hensen, according to which the fibres of the membrana basilaris constituted the sympathetic vibrating structures of the cochlea. In addition, he recognized the well-

confirmed observations that deep tones were perceived by means of the apex of the cochlea, high ones by the base.

He pointed out that at a certain stage in its development the cochlea in mammals consists simply of a canal whose epithelium has reached a very elementary stage of differentiation, and which is surrounded by meso-blastic connective tissue, there being so far no indication of a basilar membrana, or a membrane of Reissner. According to the theory of evolution, this ill-developed cochlea should be found at a permanent stage in one or other of the lower animals, and the question arises as to what function could be exercised by such a cochlea. As the structures necessary for the perception of musical tones, namely, the cochlear cords, were not yet present, there could only be perceived such sounds as those whose perception would require a relatively powerful and irregular disturbance of the whole of the nervous epithelium, along the entire extent of the cochlear duct. Such an irregular disturbance would correspond to the production of noises.

If, now, in the course of development the membrana basilaris is formed into such a structure as from its arrangement would lead one to the opinion that it served for the perception of musical tones, there is no reason that because the cochlea has acquired this more advanced faculty it should lose its previous value for the perception of noises.

The writer had arrived therefore at the conclusion, similar to that of Exner derived from other modes of reasoning, that sensation of musical tones took place when a few of the fibres of the membrana basilaris entered into sympathetic vibration, and sensation of noise when all the fibres were disturbed together.

The second part of the paper depended upon the author's observation that the organ of Corti attained a higher degree of development in the upper sections of the cochlea than it did in the lower ones. The writer supported these observations by means of dates and figures with regard to the growth of the fibres of Corti, which showed that at a certain period the development of the acoustic terminal apparatus in the basal turn came to a standstill, while it advanced still further at the apex. The segment of the cochlea near the cupola had therefore obtained a higher and finer organization than the lower part. As the upper section was the one which subserved the perception of deep tones, the further inference was drawn that the continual extension of the hearing field towards the lower end of the scale showed an increasing perfection of the organ of hearing, and that the perception of deep tones was one of its finer faculties.

If the last-mentioned principle be accepted as true, valuable clinical deductions might be drawn from it. In affections of the acoustic nerve, as distinguished from the cochlea, those fibres would first be disabled which performed the most delicate function, or, clinically expressed, in affections of the trunk of the acoustic nerve, the deep tones would be the first to be lost. Clinical experience, with a certain amount of reserve, seems to support this conclusion, as evidenced by striking clinical observations given by Politzer (*"Text-Book,"* third edition, page 112), Rohrer, and Gradenigo. The last-named author has indeed looked upon the loss

of hearing for deep tones as a diagnostic feature between disease of the trunk of the auditory nerve and that of the labyrinth.

Dr. D. KAUFMANN. *On Bilateral Malformation of the Ear, with Demonstrations of Pathological Preparations.*

The first was a case of a woman aged eighty-five, who died suddenly from epidural hæmatoma, due to fissure of the parietal bone and laceration of the posterior branch of the right middle meningeal artery. Both ears were highly malformed. On the right side, instead of the auricle there was a continuous swelling five centimètres in length, one and a third in breadth, containing a piece of cartilage, and it was separated by a cleft from the lobule, which was normal. The meatus externus in both the osseous and cartilaginous parts was absent, as also was the tympanic membrane. There was a rudimentary ossicle which was easily seen to be formed by the conjoint malleus and incus. The tympanic cavity was filled with osseous masses; the Eustachian tube and the tensor tympani muscles were normal. The niche for the fenestra ovalis was diminished and filled with a thin connective tissue membrane, in the middle of which the head of the stapes could be recognized, but the crura and the stapedius were not visible. The promontory was flattened and the niche for the fenestra rotunda was not recognizable. The jugular fossa was abnormally deep.

On the left side the auricle was diminished in size, but the lobule was normal. The helix and anthelix were very indistinct. The external meatus and membrane were absent, but rudimentary ossicles formed by the combined malleus and incus were present in the upper part of the cavity. The appearances were much the same otherwise as in the other ear. The meatus auditorius internus, and the facial and auditory nerves, were normal on both sides. On histological examination the footplate of the stapes and the orbicular ligament were normal, the openings were generally diminished in size, and the membranous labyrinth appeared to be normal, due allowance being made for the usual cadaveric changes. As regards the hearing power, it was elicited from the friends that the patient had been able to speak, although not very intelligibly, and it was probable that she had heard at a distance of about half a mètre.

The second preparation was from a woman, aged twenty-nine, who died of pulmonary tuberculosis. The auricle of the left ear was small, but normal in shape, with the exception that the tragus was feebly developed, and there was no meatal orifice, but only a shallow depression. The upper part of the auricle of the right ear was reduced to an irregular roundish elevation of about the size of a pea, containing a small piece of cartilage, and beneath it was a lappet of skin of about one inch in length and a quarter of an inch in breadth like a piece of cock's comb, notched in the middle of its posterior edge, lapping forward, and destitute of cartilage. Immediately in front of the upper half of the notched segment, there was, in the situation of the external meatus, a somewhat deep crescentic groove, and immediately in front of the notch a blind depression of the size of a hemp seed. The convex surfaces of both auricles were attached to the root of the zygoma by means of fibrous tissue. On the right side the

external cartilaginous and osseous meatus, the membrana, and the tympanic cavity were absent; the Eustachian tube, which was normal in the rest of its extent, reached as far as the inner anterior wall of the vestibule, from which cavity it was separated by a membrane. On the left side there was a fairly normal but small tympanic cavity with ossicles, a very delicate membrane, and a small passage surrounded by osseous walls, and corresponding to the bony segment of the meatus, but only of half its width, and directed upwards and backwards. The cartilaginous meatus was absent, and its place was occupied by a mass of bone from the petrous portion; the tube was normal. The internal ear was normal, but of small size, and the auditory nerve was natural.

Dr. BING considered that the fact that this patient had had a certain amount of hearing was an argument in favour of the direct conduction through the bones as opposed to cranio-tympanic conduction, as it was evident that all the woman heard in life was purely through the bones of the skull.

Dr. JOSEPH POLLAK. *Bezold's Continuous Tone Range.*

Dr. Pollak exhibited the tuning-forks and other apparatus employed by Bezold, and indicated how essential this method of examination was for the complete differential diagnosis and for the recognition of gaps in the range of hearing. His own investigations in cases of trade deafness and of syphilis of the ear had brought many interesting points to light.

Dr. GOMPERTZ. *On Inflammation of the Middle Ear in Early Infancy.*

On account of the difficulty of examining the membrane in infants due to the horizontal position and thick epidermic layer of the drum membrane, the diagnosis of the diseases of the ear at this age was very incomplete. As regards etiology he had attached great importance to injurious effect of influenza on the infantile ear. He thought the middle ear was extremely readily infected, because the pharyngeal opening of the tube in very young infants was lower down and below the level of the hard palate, so that even during simple crying there was an outward movement of air from the naso-pharynx to the tympanum. In fact he had seen pus exuding from a perforation in the tympanum during this act. As regards the symptoms, in slight cases he noted particularly the restlessness, ill-humour, loss of appetite, and in severe cases the rolling of the head from side to side, sleeplessness, calling out, continuous crying, vomiting, and a discharge of pus. In weakly children the loss of weight is often the most striking symptom. In the most severe cases the temperature may arise to 40° or over, and depression almost amounting to unconsciousness, twitchings, and convulsions, may in a short time lead to the development of the appearances characteristic of meningitis, all of which may disappear at once on the occurrence of otorrhœa. Very frequently there is swelling with tenderness of the lymphatic glands around the ear, and preauricular œdema. Sometimes where there was considerable exudation in the tympanum, increased secretion of saliva took place, which disappeared on the subsidence of

the disease. The statement that inflammation of the middle ear often gives rise to no symptoms is, in Gompertz's opinion, a mistake, and is due to the careless observations on the part of the mother or the nurse.

The symptoms above mentioned should call attention to the ear, so that it may be investigated, in order that the diagnosis may be established by the appearance of the membrane. During examination it is necessary to proceed with the greatest delicacy and rapidity, and in every way possible to turn the attention of the child in other directions; if possible the child should not cry, because the mere act of crying may produce a redness of the membrane, which may deceive the observer. The diameter of the speculum should be from two to three millimètres, although from the third month onwards even larger specula may be employed. Cerumen and scales of epidermis may easily be pressed against the meatal walls by means of the speculum or the probe, or they may be removed by means of forceps. Any remains of the vernix or soft cerumen should be syringed out, but of course this makes a difference to the subsequent appearance. Dr. Gompertz employs a special hard rubber tip for his syringe, and over it he fixes the thinnest possible piece of drainage tube, so as to avoid injury to the meatus.

In using the speculum in new-born infants one has always to make allowance for the limited field of vision. At first, as a rule, it is only the lower half of the membrane that is visible, and the upper part is gradually brought into the field. The membrane is normally thin, but more opaque than in the adult. There is also a light spot, but shorter than in the fully developed membrane. From the sixth week on, the membrane may generally be seen by even unpractised persons, but from the ninth week it should be completely visible. All stages of hyperæmia and inflammation, superficial maceration and desquamation, vesication, circumscribed bulgings, perforations, teat-shaped elevations, etc., can be observed. One peculiar point about the membrane of the young infant is the readiness with which the upper part bulges; so that it is very easy in the narrow meatus for the appearances to be misinterpreted, inasmuch as the hemispherical bulging of the upper half may fill the narrow meatus and be mistaken for the whole membrane.

In regard to treatment, Dr. Gompertz dwelt on the prompt relief to pain and the ready absorption of secretion brought about by the insertion of tampons, moistened with equal portions of Burow's solution and water, wrung out, and used either warm or cold, introduced into the meatus, and changed every two hours. He had used with advantage the ordinary instillations of boric acid and resorcin with good result, and he had noted most striking relief of pain from the one per cent. solution of menthol in oil; but the best treatment of all he found to be the tampons above mentioned, moistened with acetate of alumina, according to Zaufal's plan, only instead of Billroth's formula he used the official one, which was free from lead and absolutely unirritating. In slight cases these bring about absorption of the secretion, and in severe ones the evacuation of the pus. If there is much exudation in the tympanum he is in favour of a timely paracentesis, which may relieve pain and fever at one stroke, and bring about the most striking results even in the severest cases.

When the inflammatory appearances have subsided, the membrane is pale, and the short process visible, inflation ought to be carried out, as it is only by means of this that complete hearing power can be restored. As children at this age are not able to blow their noses, Gompertz clears away the mucus by means of the air douche in the following way: Before the air douche he blows with the Politzer bag into the nose, leaving the opposite nostril free, so that the mucus may either be blown through that nostril, or, as more rarely happens, into the pharynx; after this, the Politzer method of inflation is practised with the slightest possible pressure. The result of this blowing out of the mucus is beneficial as regards coryza, and children can breathe and drink more easily after it. In very quiet children sometimes the inflation does not succeed, because the children utter no sound. Under these circumstances Gompertz found it advisable to get a second person to syringe a little water into the child's mouth, and during the act of swallowing thereby excited the inflation is practised *à la* Politzer.

Finally, Dr. Gompertz dwelt on the great importance of free nasal breathing for the integrity of the middle ear. And, again, in quite small suckling infants he had removed adenoid vegetations, conditions which often gave rise to recurrence of middle ear inflammation. Prophylaxis is of the greatest importance, and, above all, care should be taken to prevent persons affected with coryza from coming near children.

The meeting then concluded with some eloquent remarks on the part of the PRESIDENT, Prof. POLITZER; and a vote of thanks was cordially given to the Secretary, Dr. J. Pollak, for his care and trouble in arranging the proceedings.

*Dundas Grant.*

## THE NEW YORK ACADEMY OF MEDICINE.

*May 26th, 1897.*

(Abstracted from "Laryngoscope," July, 1897.)

(Continued from page 435.)

President—Dr. J. W. GLEITSMANN.

### SECTION OF LARYNGOLOGY AND RHINOLOGY.

*A Case of Tubercular Inflammation of the Larynx.* By Dr. R. P. LINCOLN.

The patient, a female, aged sixty-one, had had a right-sided pleurisy five or six years previously. An attack of *la grippe* seven months ago was followed by hoarseness, without cough. The left cord and the left side of the larynx for a short distance below the cord were covered by a mass of inflammatory tissue. Upon the same side of the neck there were two or three enlarged glands. Examination of the laryngeal secretions gave negative results. A portion removed by means of Krause's curette was examined. Tubercle bacilli were present in moderate numbers, and in the central portion of the mass was a small area of cheesy degeneration.

Dr. EMIL MAYER said that from the report he should consider the case to be one of primary laryngeal lupus, and that the prognosis, so far as life was concerned, was good, one case having been under his observation for sixteen years before the development of tuberculosis.

Dr. F. H. BOSWORTH said that he would like to ask the previous speaker whether he knew of any recorded cases where lupus had been shown to have been transformed into tuberculosis.

Dr. MAYER, in reply to Dr. Bosworth, quoted the names of Langie, Kafeman, and Rubinstein as having recorded such cases.

The CHAIRMAN remarked that laryngeal tuberculosis had at times some very unusual features, and referred specially to a case he had shown at a previous meeting.

*A Case of Pemphigus of the Larynx.* By Dr. F. H. BOSWORTH.

The patient, a man, aged sixty-eight, had for three years suffered from patches in the mouth, pharynx, and larynx, accompanying cutaneous pemphigus. Laryngeal examination showed a number of lesions, apparently of a white fibrinous exudate, which when peeled off left the mucous membrane practically intact.

Dr. J. S. NEWCOMB referred to a case of pemphigus previously shown before the Section by Dr. Miller, of Brooklyn.

Dr. GLEITSMANN said that several cases of pemphigus of the upper air passages had been reported by Lorei, and also one case by Dr. H. G. Klotz, which he had himself seen. In this case there were lesions in the mouth which, when punctured, exuded a serous liquid and were painful. Similar lesions also appeared in the larynx. The patient ultimately died of collapse, and pemphigus vesicles were found in the intestinal tract.

Dr. BOSWORTH said that, in his case, there were no vesicles and no subjective symptoms.

*Papilloma of the Larynx.* By Dr. W. F. CHAPPELL.

Dr. Chappell referred to the statements of Dr. Delavan regarding the employment of absolute alcohol in cases of laryngeal papillomata, and mentioned the case of a child, three years of age, whose larynx was filled with papillomatous growths. Several were removed through the mouth; but, ultimately, tracheotomy had to be performed. The child's mother, an intelligent woman, was furnished with a bent, hard rubber dropper, and was instructed as to how to introduce alcohol into the larynx. As a result of continuous applications, a number of papillomata had been expelled through the tracheal tube.

Dr. W. K. SIMPSON referred to the beneficial effects of tracheotomy in such cases, owing to the rest given to the larynx, and said that he had tried the alcohol treatment in a number of such cases, but without any success.

Dr. ADOLPH RUPP said that he had tried the alcohol spray in a case of papilloma of the larynx, and with success.

Dr. C. G. COAKLEY had also tried the alcohol method in a case of recurrent laryngeal papilloma, and likewise with success. The growths had rapidly shrunk in size and had then been removed.

*Palate Hook.*

Dr. GLEITSMANN exhibited this instrument, designed by Dr. Lindt, and remarked that by its means he had been able to secure a good view of the post-nasal space.

*Ozæna in its Relation to Diseases of the Accessory Sinuses.* By Dr. T. J. HARRIS.

Dr. Harris said that of the cases of ozæna under his charge five possessed sinus disease, one had adenoid growths, one case was syphilitic, and three cases did not show any involvement of the sinus. He had come to the following conclusions:—

(1) That there is no single constant cause for ozæna, and that ozæna is rightly to be regarded only as a symptom.

(2) That genuine atrophy, until recently unproved, from Loewenberg's studies, confirmed by Abel and Paulsen, in all probability does exist.

(3) That focal disease, including especially disease of the accessory sinuses, while not the only cause, is a very important and common cause.

(4) As a most practical conclusion for the rhinologist, each case of ozæna, in addition to being treated with the proper constitutional and local measures, is to be thoroughly and repeatedly examined for evidence of sinus involvement.

Dr. BOSWORTH said that he took issue with almost every point in Dr. Harris's admirable summary of the subject. His experience led him to believe that there was no more connection between atrophic rhinitis and sinus disease than between atrophic rhinitis and cirrhosis of the liver.

Dr. C. H. KNIGHT said that it seemed impossible to admit anything more than coincidence between atrophic rhinitis and sinus disease.

Dr. R. C. MYLES said that his experience bore out Dr. Harris's statements that atrophic rhinitis was frequently associated with sinus disease. He had recently reported a case where, after operation upon the antrum, the atrophic rhinitis was at once relieved.

Dr. BEAMAN DOUGLASS expressed the opinion that atrophic rhinitis could not primarily be dependent upon sinus disease, and as regards the presence of a specific bacillus, he did not think that it was necessary to invoke such a causative factor. He believed the atrophy found was the result of an ordinary hypertrophic inflammation occurring where there is an unhealthy environment, a debilitated constitution, or an unfavourable heredity.

Dr. ADOLPH RUPP mentioned a case he had had under observation for fifteen years, during which time he had seen the turbinated bodies atrophy. In this particular case there had been frontal sinus disease upon both sides.

Dr. T. P. BERENS said that he did not consider any one cause responsible for atrophic rhinitis. He had observed cases where atrophy was due to the presence of adenoids, and also cases where frontal sinus disease existed.

Dr. GLEITSMANN said that the youngest age at which he had observed atrophic rhinitis was six years.

Dr. HARRIS, in reply, said that he had become convinced that sinus or other focal disease must be regarded as one of the causes of ozæna. He advocated the importance of a thorough search for evidence of sinus trouble in every case of atrophic rhinitis coming under observation.

*A Case of Angioma of the Tongue.* By Dr. J. C. SHARP.

The patient, a child aged eight, had a tumour about the size of a hazel nut on the side of the tongue. Its origin had been traumatic, and the author regarded it as being an angioma.

*W. Milligan.*

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SOCIÉTÉ FRANÇAISE D'OTOLOGIE, DE LARYNGOLOGIE,  
ET DE RHINOLOGIE.

*May, 1897.*

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WE append several "authors' abstracts" of papers read before this Society, which may be found of interest as a supplement to the report, translated and condensed by Mr. Ernest Waggett, which appeared in our September number.

*On Ictus Laryngeus.* By Dr. MOLL (Arnheim).

After a critical review of the different theories as to the nature of ictus laryngeus, and having mentioned principally the studies of Garel and Collet in France, and of Schadowald in Germany, Dr. Moll explained his opinion about the nature of the phenomenon. He considers as the cause of the ictus a peripheral excitation of the superior laryngeal nerve. This irritation is often produced by an inflammation of the mucous membrane of the respiratory track; but that this inflammation need not always be present is proved by the two cases which Moll communicated, for in both his cases there was no local irritation of the nerve, it being excited by the way of the nasal reflex.

The first case was that of a man of forty-one years of age, who came to Dr. Moll complaining of irritation of the throat, which made him cough so violently that he began to be anxious. He could not find any morbid affection of the pharynx, the larynx, neither the lungs nor the heart (the urine contained no albumen nor glucose). The nose, which was normal on the left side, was much obstructed on the right by reason of the presence of a bony prominence, which pushed its way into the substance of the inferior turbinated body. Respiration was difficult through the nose. Dr. Moll asked him if he suffered sometimes from giddiness and loss of consciousness, and he answered that it occurred after severe attacks of coughing; but it was to be remarked that, although he coughed very much in the morning on rising, he at that time never felt the phenomenon of ictus, but only when excited, when he was with his friends, or laughing very much. Dr. Moll removed the exostosis of the septum with the saw, worked by the electric motor. After the wound healed up the phenomenon rapidly disappeared.

In the other case, in which the patient was also prone to vertigo and

loss of consciousness when coughing or laughing violently, the nose was the only affected organ, save the nervous constitution, which always exists in cases of nasal reflex neurosis. The connection between the ictus and the pathological state of the nose was not so clear as in the first case referred to, the operation not yet having been performed, because the man did not like to undergo it. As an indication of the nervous condition of this patient Dr. Moll mentioned, finally, that the daughter of this man, a girl aged twelve, suffered from epileptiform attacks. He found adenoid growths in the pharyngo-nasal cavity, which he removed. In the nose there was a large exostosis of the septum on the left, and such a deviation of the cartilaginous portion of the septum to the right that respiration through this nostril was nearly impossible. After the different operations the attacks diminished by degrees in vehemence, and at last nearly disappeared—merely only a show of an attack remaining without any loss of consciousness.

*Author's Abstract.*

*Considerations on the Remote Effects of Operations in Suppuration of the Frontal Sinus.* By Dr. RIVIÈRE (Lyons).

In a case operated on two years and a half ago complete recovery had taken place. The case was one of old-standing latent empyema, with diplopia, induced by a fluctuating swelling on the inner wall of the orbit. The operation was carried out by the old method (large opening, with maintenance of drainage for three months). Dr. Rivière is of the opinion that in certain cases there should be kept up, alongside of the typical Ogston-Luc operation, such procedures as bring about slow cicatrization of the wound, the depressed cicatrix tending to diminish the capacity of the sinus.

*Author's Abstract.*

*The Treatment of Laryngitis by Means of Intralaryngeal Sprays.* By Dr. LOUIS VACHER (Orleans).

Up till recently it has been difficult to make use of this mode of treatment, because it was necessary to have the personal intervention of the physician, it being impossible for the patient to make use of intralaryngeal sprays for himself on account of the want of an instrument allowing him to do it with facility. I hope to fill this gap by means of the instrument which I now show you. It consists of a test tube graduated at every five drachms, so that the exact quantity of liquid employed may be measured. There is a re-curved stem with a rotating movement permitting of the spray being sent in any given direction. The ball is a single one of caoutchouc, so that the spray is intermittent, and is only produced at the moment of compression. Thanks to this intermittent spray the patients may employ solutions of a staining or cauterizing nature without fear of injuring their linen, their face, or their mouth. The tube is easily rendered aseptic by boiling it in a solution of carbonate of soda or soaking it in some antiseptic solution. This instrument is useful not only for the larynx, but also for the naso-pharynx, the nasal fossæ, and even the ear. It is manufactured by Collin, who has devoted great care to make it perfect.

Patients soon acquire the art of managing it and of directing the spray into the larynx or the naso-pharynx. They have to draw the tongue

forward and utter a sound before pressing the ball, so as to avoid projecting the liquid below the glottis. Thanks to this instrument, of which many *confrères* have already appreciated the convenience and the advantages, I have been able during the last few months to apply this intralaryngeal treatment in a large number of cases. It is preferable to inhalations, to insufflations of powders, or to brushings, except within certain narrow limits. With it one can make use of solutions of an emollient, calming, astringent, or caustic nature, according to circumstances. By means of this instrument cocaine may be used without fear, as the dose can be strictly limited, and which can only be of benefit if the patient promises absolutely not to exceed the dose specified. This spray of cocaine is calming and decongesting, and it enables the patient to stand the active treatment more readily and without reflex movement. I have used it with success in cases of chronic tracheitis, which are often rebellious to treatment.

In general terms it may be said that this instrument has made the use of valuable and active remedies available for all suffering from these affections.

*Author's Abstract.*

*On Affections of the Ear occurring in Gouty Persons, or those of Gouty Family Tendency.* By Dr. GEORGE GELLÉ, Jun. (Paris).

In his paper Dr. Gellé shows how the different affections of the ear are varied when they occur in people suffering from gout or having hereditary gouty tendencies.

*Primo.*—Gouty persons, or members of gouty families, have an unfortunate predisposition to affections of the ear. Like chronic rheumatism gout does not spare this organ, and this is not surprising if one recalls the extreme frequency of catarrh of the respiratory passages, quinsy, tonsillitis, etc., in the unfortunate inheritors of gout. The ear is often affected from the earliest infancy (eczema, external otitis, otorrhœa), and in these the otorrhœas following the fevers of infancy are often very severe and intractable. Active hygienic treatment is necessary as soon as the affection of the ear shows itself, in addition to the local treatment which is, of course, of primary importance. Dr. Gellé insists on attention, at the same time, to the general treatment, which has a preponderating effect on the subsequent evolution of the processes going on in the ear.

*Secundo.*—Gouty otitis is most often fluxional, and is characterized by signs of obstruction of the tubes and a redness of the superior segment of the membrana tympani extending on to the wall of the attic. This fluxation has a tendency to localize itself in the cavity occupied by the ossicles, and in the chain of bones, which is often rendered immobile by it (producing vertigo). In addition to the acute attacks it is not uncommon to find calcareous deposits infiltrating the tympanic membrane and thickening the handle of the malleus, at the tip of which there is a spatulate swelling. Among the prodromata there is frequently observed an œdematous pharyngitis, characterized by the special aspect which we have designated "false pillars." If the otitis is unilateral, the pharyngitis is situated on the side of the lesion, but in cases of double otitis it is bilateral.

*Tertio.*—Very often (if we may judge by the cases which the writer

has published) the catarrhal otitis presages an imminent attack of articular gout, after which everything returns into good order. The noises in the head and the attacks of vertigo which occur in gouty subjects, and in sclerosis of the middle ear, frequently cease on the occurrence of an attack of gout in the joints or a crisis of hepatic colic.

*Quarto.*—In the author's opinion, the gouty vertigo described by classical writers is more often a vertigo from unrecognized disease of the ear—because, in the cases in which he has had an opportunity of examining the ear, he has found signs of old sclerosis sufficiently advanced and marked to account for the production of the vertigo. *Author's Abstract.*

*Syphilitic Stricture of the Upper Extremity of the Œsophagus treated by means of Jaboulay's Dilator.* By Dr. LANOIS.

The patient, a female aged fifty-five, contracted syphilis at the age of thirty, and four or five years afterwards she commenced to experience a slight difficulty in deglutition. This has greatly increased since an attack of typhoid fever four years ago, and for the last four months the patient has been unable to swallow anything except soups and liquids.

On exploration there was found at the upper end of the œsophagus, at its union with the pharynx, a light annular fibrous stricture, which admitted with difficulty the olive-headed bougie No. 3. Syphilitic strictures of the œsophagus are very rare, and, as a rule, they are not diagnosed, except by exclusion.

This patient has been treated by means of Jaboulay's dilator, a probang, fitted with a cape of india-rubber, into which air can be blown, and which thus exercises a gentle and elastic dilatation without the slightest pain. The result in this case was extremely satisfactory. *Author's Abstract.*

*Contribution to the Study of Vascular Tumours of the Nasal Septum.* By Dr. EGGER (Paris).

The author removed from the septum of a woman, aged seventy-one, a pediculated tumour, of the size of a cherry, which had given rise to frequent attacks of epistaxis. The operation was very simple in its performance and after-course, and on examination eight months afterwards there was no recurrence.

Microscopical section revealed vascular dilatations, containing blood-clot in all stages of organization, from the original fresh focus, the degenerating clot and the same in course of regeneration, up to that of organized tissue tending to undergo sclerosis. The tumour appeared to be the result of a series of interstitial hæmorrhages, each focus having been the seat of organizing changes, terminating in the development of blood vessels of new formation.

To this neoplasm the author gives the name of *hæmorrhagic polypus*, as indicating at the same time its naked-eye appearance, its histological structure, and its mode of formation. *Author's Abstract.*

*On the Employment of certain Vocal Exercises in the Treatment of Hoarseness due to Over Use of the Voice.* By DUNDAS GRANT (London).

IN addition to brushings, sprays, warm inhalations, cold compresses, and the traditional lozenges employed in the condition above mentioned when

there is present a state of congestion of the vocal cords, I propose to point out the supplementary value of certain vocal exercises which may be easily employed. These exercises consist in the utterance of notes in the head or thin register, modified as if for the production of the mixed voice. The conditions to which my description applies are found most often, though not exclusively, in sopranos and tenors, who are led by the exigencies of their profession to push the use of the "chest" register beyond the point where it can be employed without risk of damaging the vocal cords. During such efforts the pitch of the tone is raised by an increase in the tension of the cords in their length, and as we know that the tension necessary is proportional to the square of the rise in pitch, the traction exercised becomes enormous, and inevitably dangerous to the integrity of the vocal cords. In the use of the head register or the mixed voice several elements combine. In any case there is a mechanism of some sort which produces a thinning of the vocal cords. My opinion is that it depends upon a contraction of the vertical fibres of the internal thyroarytenoid muscles, more or less developed, according to the vocal habits of the individual. As a fact, the classical experiment with transillumination shows us that when the subject sings certain notes which he can emit equally in each register, the light traverses the cords with an enormously increased intensity as soon as on the same note he passes from the chest register (thick register) to that of the head (thin register). This experiment demonstrates to my mind incontestably that a thinning of the vocal cords has taken place. It seems a natural inference that such a thinning is impossible without at the same time there being a more or less complete expulsion of the contents of the vascular channels in the cords, and consequently a diminution of the hyperæmia of which we have already spoken.

I propose, therefore, as a supplementary remedy, the discreet use of the thin register in cases of hoarseness caused by congestion of the vocal cords, more especially when produced by over use of the voice.

It happens very often that patients from want of teaching, or on account of the morbid condition, find it extremely difficult, or even impossible, to emit notes in the thin register. I am informed that it is customary with minor comic singers to test their own vocal condition by means of such notes, imitating, so to speak, a little girl calling her cat "Puss—puss." In the absence of serious changes in the laryngeal mucous membrane, the method which most readily facilitates the production of these notes is that recommended by Dr. Holbrook Curtis, of New York ("Voice Building and Tone Placing," 1896). To carry it out the patient leans the head slightly forwards, pushes out the lips as if in the act of lighting a pipe, and disposes the mouth as if for the emission of the consonants "p m." Then he hums softly on a note above what he is accustomed to produce in the thick register. As soon as this humming is well started, he opens the mouth widely and emits the sound "aw"; he thus sings the syllable "pmaw." The patient often finds that it is easier to commence with a very high note, and to sing gradually down the scale until he reaches the lowest note which he can utter softly without effort and without leaving the thin register. By practising this exercise for a few minutes, three

or four times a day, the singer who is affected with hoarseness is often enabled to utter clear tones; at the same time he must not neglect the other therapeutical means which, by themselves, are so often known to fail.

It is understood that the instructor, whether physician or professor of singing, must assure himself that the patient has acquired the exact method before being left to himself, and this is on the whole fairly easy. An indiscreet excess of zeal, however, may bring about results which are negative, or even injurious, if from want of intelligence or of instruction the patient forces the voice by mere effort instead of by the exercise of the knack so well described by Curtis, and which I have here endeavoured to explain. I might cite a number of cases in which this method has given results which have proved its value, including singers in synagogues and churches, choristers, actors, and other voice-users, where contrary to all expectation it has sometimes been possible to continue their professional work under circumstances where previous experience would have negated this possibility.

In recommending the use of these exercises in morbid conditions of the larynx, I do not wish to trench in any respect on the province of the teacher of singing, and I offer it simply as the therapeutical application to diseases of the larynx of a fact derived from an elementary consideration of the physiology of the voice.

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## ABSTRACTS.

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### DIPHTHERIA, &C.

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*The Increase of Diphtheria in London.* "Lancet," August 14, 1897.

IT is a most lamentable fact that with all our outlay on sanitation in London the disease of diphtheria steadily goes on increasing in prevalence. The disease is five times more fatal at present than scarlet fever, in spite of the reduction in the death rate effected by the antitoxin treatment. The subject requires close investigation, and it is suggested that an important point would be earlier diagnosis and treatment.

*St Clair Thomson.*

*The Standardizing of Antitoxins.* "Lancet," August 14, 1897.

THE "Lancet" has from time to time (*vide* JOURNAL OF LARYNGOLOGY, Vol. XI., 1896, p. 294) insisted most strongly that some means should be provided whereby antitoxins supplied for the treatment of diphtheria and tetanus, especially the former, should be tested and standardized before passing into the hands of those who are to use them. The Government decline to interfere in the matter, maintaining that it has to do with the prevention of disease and not with its treatment. The "Lancet" therefore hears with satisfaction that the Royal Colleges of Physicians of London and Surgeons of England are making arrangements to test any antitoxin that may be sent to them, and send out with such antitoxin a certificate of strength and purity.

*St Clair Thomson.*

## MOUTH, &amp;c.

**Renner, W. Scott** (Buffalo, N.Y.).—*Chronic Follicular Tonsillitis*. "Med. Record," Aug. 28, 1897.

THE plugs in the crypts are made up of leucocytes, epithelium, chalk, mucus, and various bacteria. The tonsils affected are often more or less hypertrophied, but some are considerably atrophied. The large tonsils, with numerous crypts, do not often give as much trouble as those with less secretion, especially if in the latter the crypts are so located that the secretion is expressed with difficulty by the ordinary movements of the throat. The larger tonsils, when filled with secretion, cause only (unless acutely affected) a sense of fullness. Where, however, there is more obstruction to the discharge of secretion there is pain in the throat, pain extending to the ear or chest, pain externally in the neck on one or both sides, fatigue of the neck muscles, severe neuralgia, or other reflex phenomena. Symptoms usually disappear for the time when secretion is expressed. As the plugs increase in size they often cause swelling of the orifices, or the middle of the duct external to the plugs. This is specially apt to occur after exposure to cold or after hot food. Acute inflammation, too, may result, owing to increased virulence of streptococci in secretion, and may last a day or two, or may end in a regular acute follicular tonsillitis. Patients subject to frequent quinsy are usually subject to chronic follicular tonsillitis. The upper angle of tonsil, often hidden from view by the approaching palatine folds, often has one, and sometimes two, crypts, whose orifices pointing upward do not permit the easy escape of secretion. The patient recognizes this to be the offending part when touched. Dysphagia, otalgia, or a tickling in external auditory canal are complained of. The last-mentioned symptom was relieved in one case by painting the upper part of tonsil with cocaine.

He gives a case of aching and acute burning sensation in the throat, following singing or continued talking. This was treated in many ways, but not relieved till the tonsil was discovered to be a small crypt-like organ distended with secretion, and was thoroughly destroyed by the electro-cautery. Paroxysmal cough is often due to diseased tonsils.

*Treatment*.—Open and destroy every crypt, or, if necessary, the whole tonsil. The author prefers, when tonsillotomy is necessary, to do it with the cold snare, as being more thorough than with the tonsillotome. Whatever method is used adhesions between palatine folds and tonsils should be broken down. Fibroid tonsils require an *écraseur* or the galvano-cautery snare. Flat tonsils which cannot thus be grasped he treats by opening the crypts with long sharp bistoury, and removing intervening portions with cold snare or cutting forceps, or by destroying them with electro-cautery. Destruction with the electro-cautery is required for cases of large crypts with scarcely any tonsillar tissue around them. *R. M. Fenn*.

**Sympton, E. M.**—*Notes of a Case of Chronic Superficial Dissecting Glossitis*. "Brit. Med. Journ.," Sept. 11, 1897.

MALE, aged twenty-one, not syphilitic, not alcoholic, but dyspeptic, with history of relapsing glossitis five or six years; worse during attacks of dyspepsia. Tongue large, swollen, smooth (except for furrows), and glossy red. Whitish leucomatous patches, one on each side of median fissure on dorsum, and two or three at the tip. Tongue invaded for half an inch or so from the borders by deepish fissures, not ulcerated, but as tender as the rest of the surface of the organ. Teeth good.

*Treatment*.—Simple and unirritating diet. Mouth wash—glycerine and borax—followed later by painting the tongue with chromic acid solution. *Internally*,

chlorate of potash, nux vomica, and gentian, followed later by iron. In less than three months he had almost a normal tongue.

A photograph from a painting of the tongue accompanies the paper.

*R. M. Fenn.*

## NOSE, &C.

**Power, D'Arcy.**—*Empyema of Antrum in a Child aged eight weeks.* "British Med. Journ.," Sept. 25, 1897.

BOY, eight weeks old, wasting, with history of bruised face in delivery by forceps. At one month of age, difficulty in closing mouth and refusal of bottle were accompanied by swelling and redness below the right eye. The abscess was opened at lower part of right lower eyelid, and pus flowed till seen by the author. Right side of face then seen to be fuller than left, with redness of cheek and lower lid—a little pus exuding from alveolar border of upper jaw. A probe passed along the sinus in cheek showed part of the superior maxilla to be bare. Author enlarged sinus, and made a hole through floor of antrum, and then passed drainage tube from eyelid to mouth. A drachm of thick pus escaped. Child died ten days later. Author then refers to a few recorded cases in young children, and gives references.

*R. M. Fenn.*

**Williams, Campbell.**—*Adenoids.* "The Clinical Journal," Sept. 18, 1897.

THE author operates under anæsthesia with the A.C.E. mixture, and as many "adenoid" children take anæsthetics badly he makes it a rule to have the body stripped to the waist in case of accidents, so that one can clap on a hot towel over the heart as a cardiac stimulant, or inject ether if required. Cardiac syncope is not an uncommon occurrence during operation in these cases, and it may happen at any period during the administration from the first few whiffs onwards. The author first removes the tonsils in the dorsal position, and as soon as this is done the patient's head is pulled on so that it hangs downwards over the end of the table. The adenoids are then removed with Gottstein's knife.

*Middlemass Hunt.*

## LARYNX.

**Alcock, J.**—*A Case of Rupture of the Trachea; Necropsy.* "Lancet," Sept. 25, 1897.

THE patient was a strong man who received a heavy blow over the trachea. On admission to the hospital he was slightly cyanosed, his breathing being laboured and occasionally stridulous. It was impossible to feel the trachea or larynx owing to surgical emphysema. The treatment was expectant, as the patient—after some pneumonia—continued to improve. He appeared to be entirely out of danger when, eleven days after the accident, he suddenly cried out, two or three pints of blood gushed from his mouth, and in less than two minutes he was dead.

The *post-mortem* showed a complete rupture of the trachea between the ninth and tenth rings. The ends were separated by about two inches, the upper end of the lower fragment being one and one-eighth inches below the top of the sternum. An abscess cavity surrounded the injured parts, filled with blood clot. None of the large arteries were wounded, and it seems probable that the blood came from ulceration of a large vein, possibly the left innominate.

No laryngoscopic examination had been made.

*St Clair Thomson.*

**Brown, Sanger.**—*Hysterical Aphonia*. "Medical Record," July 17, 1897.

THE youngest case he has discovered described in literature was a girl of nine years, the oldest a woman of seventy-four. There are two types at least—the impure (which may come on by degrees), where aphonia accompanies other signs of hysteria, such as hysterical pains, hemianæsthesia, vomiting, etc., occurring with or without any apparent exciting cause. In such cases often the aphonia is not pure—*i.e.*, not constantly absolute. The second or pure form of aphonia comes on suddenly, with or without an exciting cause, persists a longer or shorter time, and is the sole evidence of hysteria.

Suggestion is the secret of the many methods of successful treatment, of which he quotes three : hypnotism ; Oliver's method of pinching the posterior part of arytenoids between the thumb and index finger, whilst shaking the larynx and calling on patient to phonate ; and, thirdly, causing the patient to cough and simultaneously pronounce the different vowel sounds.

The author quotes five illustrative cases, including the following :—A lad, aged twenty, farmer's son, intelligent, industrious, of correct habits, fond of company, and not notably nervous. When aged eleven was awakened by his father speaking sharply to him, and since then no vocal sound of any description had been uttered, not even in laughing, except a few times on clearing his throat. He was otherwise quite healthy. The application of a strong faradic current with strong suggestion cured him in a fortnight.

The author concludes with a few remarks on the pathology of hysteria, and quotes Lepine's and Duval's views.

*R. M. Fenn.*

**Bunch, J. L., and Lake, R.**—*A Foreign Body in the Air Passages for Nine Years ; Operation ; Removal ; Recovery*. "Lancet," Sept. 25, 1897.

FROM the history of the case it appears that a piece of mutton bone must have been lodged in the patient's right bronchus while she was partaking of sheep's broth. After the spasm and first acute symptoms were passed, this foreign body appears to have caused no general symptoms except the regular recurrence of a winter cough. This state of things continued for eight years, at the end of which time she had a violent fit of coughing and hæmoptysis, and—as the subsequent progress proved—the bone shifted from the bronchus into the trachea. Her voice became husky ; dyspnœa became marked, especially on exertion, and increased ; and she was shown at a laryngological society as a case of tracheal stenosis of specific origin. Mr. Lake diagnosed a foreign body lying in the trachea, and this was successfully removed by tracheotomy. It proved to be a piece of mutton bone, hard and extremely thin.

A very complete bibliographical table is appended, including every recorded case during the present century that the authors have been able to find in which the foreign body was present for one year or longer, and in which recovery followed either operation or spontaneous ejection. Thirty-one such cases are given. The cases in which the foreign body was retained longer than that forming the basis of this paper are three in number.

*St Clair Thomson.*

**Campbell, Colin.**—*Tracheal Injections*. "Lancet," September 11, 1897.

REFERRING to the leading article of September 4th, the writer points out that most of the arguments have been anticipated in his own paper published in the "Medico-Chirurgical Transactions," Vol. LXXXVIII., 1894. He considers that olive oil is not the best vehicle to convey the medicinal fluid to the lungs. As regards a doubt cast on the absorption of the drugs by the lung tissue, he injects into the tracheæ of patients each week one quart of fluid. If it be not absorbed, what becomes of it ?

*St Clair Thomson.*

**Campbell, Harry.**—*The Therapeutical Aspects of Talking, Shouting, Singing, Laughing, Crying, Sighing, and Yawning.* "Lancet," July 17, 1897.

THIS philosophical article is so full of interest that it would be impossible to attempt a *résumé* of it without spoiling all its charm. The views expressed are founded on physiological facts, and are conveyed in a pleasant manner with many illustrative instances and quotations. We can recommend a study of the paper *in extenso.* StClair Thomson.

**Foggie, W. C.**—*A Case of Infantile Respiratory Stridor.* "Scottish Med. and Surg. Journ.," Sept., 1897.

THE patient, a female child, aged one year, came under the author's observation on account of slight bronchitis, accompanied by marked inspiratory stridor. There was no family history of any such affection, nor of any nervous disease. The child was somewhat pale and puny, and had eczema capitis and a suppurating left ear. The respirations numbered about forty per minute. The chest was well formed. The stridor had been present from birth, and showed great variations. It was always best marked with inspiration, and was only present with expiration when the condition was more distinct than usual. Any excitement would increase the stridor, but great excitement would inhibit it. No cyanosis was or had been present. Under treatment the child's general health improved. The author regards the case as an example of infantile respiratory spasm or congenital laryngeal stridor. An examination of the larynx, so far as it could be seen, failed to detect anything abnormal. The author quotes Dr. Thomson's view, that the pathology of the affection is a spasmodic laryngeal muscular contraction of central nervous origin—probably a developmental neurosis closely analogous in many ways to conditions such as speech stammering. W. Milligan.

**Leech, Priestley.**—*Case of Polypus of the Epiglottis; Sub-Hyoid Pharyngotomy; Necropsy.* "Lancet," Aug. 14, 1897.

THIS affection is rare, and is interesting because the operation—which is not a very common one—was followed by a fatal termination. The exact cause of death is not very clear.

A man, aged fifty-four, complained of dysphagia, odynephagia, and dysphonia. Examination showed a pinkish blue swelling, as big as a Tangerine orange, apparently sessile and springing from the free edge of the epiglottis. Thinking that it was simply a retention cyst, it was punctured. This gave rise to such alarming hæmorrhage that a silk ligature had to be passed round the tumour. Next day the breath had an offensive odour, and the tumour was found to be covered with a muco-sanguinolent discharge. As the patient was in a weak state operation was postponed for a week. Sub-hyoid pharyngotomy was decided on so as to avoid as far as possible the chance of hæmorrhage. As the patient could not lie down, tracheotomy was done in a sitting posture after the subcutaneous injection of hydrochlorate of cocaine. A Hahn's tube was inserted, and sub-hyoid pharyngotomy performed. The tumour was brought out through the wound, and removed along with the tip of the epiglottis. Very little blood was lost during the operation. The patient recovered well from the operation, but that same evening there was some increase in the pulse and respiration. Next day he was restless, and there was a fœtid smell from the mouth; he became restless, and the pulse and respiration increased. The following day he died. [The temperature is not given.—REP.]

Microscopic examination showed vascular fibro-cellular tissue. There was no evidence of malignant disease.

The author attributes the fatal termination to the shock of the operation so

soon after the hæmorrhage. As regards the operation itself he found that it is not difficult to perform, and it gives a splendid view of the epiglottis and the upper part of the larynx.

StClair Thomson.

**Morris, Henry.**—*The Proper Treatment of Cut-Throat Wounds by Immediate Suturing of all the Divided Structures.* "Lancet," June 5, 1897.

THE author thinks that the time-honoured custom of leaving cut-throat wounds open to heal by granulation and cicatrization is still taught in the schools and in some leading text-books. The method recommended in the title of the paper shortens convalescence; enables the patient to talk and swallow naturally within a very few hours after the injury, instead of being fed for days, or even for a week or two, by means of the œsophageal tube; does away with the troublesome cough and the abominable discharge of food, saliva, and bronchial secretion through the wound; permits of a dressing being maintained over the wound for days together; and is not followed by any of the old risks of incurvation of the edges, of stricture, or of fistula. The old method was only tolerable as long as surgeons were less particular about hæmostasis, drainage, and antiseptics.

The cut edges of the trachea should be adjusted by fine silk sutures, which should not penetrate the mucous membrane. Too much care cannot be given to the accurate adjustment of the wound in the edges of the air tube. The tissues above should be brought together by layers of buried sutures. A very small drainage tube may be inserted on each side near the outer extremities of the superficial wound, but not near the middle line of the trachea. The old method of keeping the head bent towards the sternum during healing is of great importance as a means of preventing tension on the sutures. This principle of immediate suture is recommended by J. E. Platt ("Brit. Med. Journ.," May 8th, 1897). *Vide* JOURNAL OF LARYNGOLOGY, Vol. XII. p. 522; and Hogarth ("Brit. Med. Journ.," Aug. 21st, 1897); *vide* JOURNAL OF LARYNGOLOGY, Vol. XII. p. 573.

StClair Thomson.

**Spengler, A.** (St. Petersburg).—*On the Use of Parachlor-phenol in Some Diseases of the Upper Air Passages.* "Monats. für Ohrenheilk.," July, 1897.

THIS is recommended for application in solution in glycerine. Usually, to commence with, the strength is five per cent., and this is increased or diminished according to the tolerance of the patient. It is a disinfecting and anæsthetizing agent, which, if pure, does not irritate the mucous membrane or inconvenience the patient. It is found of value in infiltrations and ulcerations of tuberculous, syphilitic, or chronic inflammatory nature; while in inoperable carcinoma it improves the condition by checking superimposed infection by pus microbes.

Dundas Grant.

**Sutherland, G. A., and Lack, H. Lambert.**—*Congenital Laryngeal Obstruction.* "Lancet," Sept. 11, 1897.

THIS affection may be described as a form of persistent laryngeal obstruction, commencing at or soon after birth, and accompanied by a peculiar stridor. The following observations are founded on eighteen well-marked cases.

As to predisposing circumstances, no facts of importance have been elicited. It did not appear to be hereditary or connected with the nature of the mother's *accouchement*. The stridor is usually observed at, or very soon after, birth, and, as a rule, it was only on account of the noisy respiration that the parents sought advice. Many of the patients were well nourished and apparently in the best of health, and did not appear to be in the least inconvenienced by the laryngeal obstruction. Nothing definite was noted as regards associated illnesses; syphilis was only present in one case, and a moderate amount of rickets was noted

several times in infants over three months of age, but not more frequently than is observed amongst hospital patients.

The inspiration begins with a croaking noise, and ends in a high-pitched note; expiration is accompanied by a short croak when the stridor is loud, but at other times it is noiseless. Inspiratory stridor was always very much louder than expiration.

Cyanosis may be entirely absent; a condition of persistent cyanosis is very rare, but it was a prominent feature in the only fatal case met with. Thoracic and abdominal retraction was present in all except the slightest forms of the affection, but, like the stridor, it was intermittent and varied in degree. In none of the cases examined were the tonsils found to be much enlarged or adenoid vegetations of any importance, and in none were there any of the symptoms usually associated with these affections. In this respect the experience of the authors agrees with that of M'Bride, and is at variance with that of Eustace Smith and Robertson, who apparently consider the presence of adenoid vegetations an important etiological factor in the affection. The larynx was examined in six cases, and in all of them the following characteristic appearances were found. The epiglottis was sharply folded on itself, the two lateral folds being in close apposition, and in some cases in contact. The aryteno-epiglottic folds were approximated, and thus the upper aperture of the larynx was reduced to a long narrow slit. The thin folds bounding this aperture seemed quite flaccid, and flapped to and fro in respiration.

The inspiratory column of air striking down on these folds drives them together, and on expiration they again separated. In some cases—those which produced a "purring" sound—the coarse vibrations of these folds could be distinctly seen. In only a few of the cases could a view of the vocal cords be obtained. They appeared white and quite normal, as the symptoms would have led one to expect.

In the case of a child otherwise healthy the stridor tended to increase in loudness for some weeks or months after birth, then to continue more or less stationary until the eighth or ninth month, and then gradually to diminish until it was lost about the end of the eighteenth month or second year.

As to the pathology of the affection, the authors are convinced that it depends on a valvular action of the upper part of the aperture of the larynx, a falling inwards of its lateral walls during inspiration, dependent partly on a peculiar congenital malformation of the larynx, and partly on the flaccidity of these parts in infants. As the child grows the malformation remains, but the stridor passes off as the parts forming the superior laryngeal aperture become less yielding. It might be objected that the laryngeal condition above described was really the normal infantile type of larynx. But the condition is occasionally met with in adult life; besides, one of the authors has systematically examined the larynx of every infant coming under his care during many months past, and has never yet observed the malformation except in association with this affection. The theory that the affection is in any way a spasm seems to us to be utterly untenable in view of the appearances observed, nor does this theory satisfactorily explain the fact that in some cases the obstruction may persist constantly for months, and even during sleep, chloroform anæsthetics, etc.

The diagnosis of the affection is easily made by all who have once seen or heard it. The chief points to be attended to are the early onset, the peculiar characters of the stridor—which occurs all day, and even at night, with but short intervals of quiet breathing—the evidence of obstructed respiration, without, as a rule, any apparent distress, and the loud, clear cry. In addition, the laryngoscopic appearances are believed to be absolutely characteristic. Attention to the above points will be found sufficient to distinguish it from the following conditions which more or less resemble it: (1) laryngismus stridulus, and other forms of

glottic spasm occasionally met with in connection with post-nasal growths, excessive crying, etc. ; (2) laryngitis in infants ; and (3) papillomata of the larynx. The prognosis is favourable, but it should be borne in mind that the obstruction to breathing may lead directly to death by suffocation. Tracheotomy may therefore be called for, otherwise the treatment is general.

There are few references to this condition in medical literature, and a useful bibliography is attached.

*St Clair Thomson.*

*Tracheal Injections.* "Lancet," September 4, 1897.

A LEADING article comments on a paper published by J. A. Thompson in the "Journal of the American Medical Association" of June 26th. The results of this writer's experience, which has been very large, are decidedly favourable to the mode of treatment. He considers that there are several reasons for the slow growth of this manner of treatment in professional favour, the principal one being that few physicians are sufficiently skilled in treatment of diseases of the upper air passages. If properly given, tracheal injections cause little if any inconvenience. The most serviceable solutions are menthol (two per cent.), guaiacol (one per cent.), creosote (one per cent.), and camphor (from two to three per cent.). The vehicle used should be one of the light petroleum oils or olive oil.

*St Clair Thomson.*

**Yonge, E. S.**—*The Prevalence of Throat Affections among Female Elementary School Teachers in Manchester.* "British Med. Journ.," Sept. 25, 1897.

ONE HUNDRED school teachers, chosen haphazard from School Board and Voluntary schools. Of these, thirty-five were found to have definite laryngeal lesions, including catarrhal inflammation of cords, fourteen cases ; with nodular thickening, two ; paresis of laryngeal muscles, eleven ; "teachers' nodes," seven ; fibro-papilloma on left cord and node on right, one. Thirty (including some of the above) had pharyngeal lesions ; twelve had simple chronic and eighteen granular pharyngitis. The author summarizes :—Forty-five per cent. had some definite lesion of the larynx or pharynx, excluding mere temporary congestion. Laryngeal lesions were more abundant than pharyngeal. Laryngeal strain, a tired, aching feeling usually referred to the region of the larynx, was present in thirty cases, twenty-six of which showed some lesion of the larynx or pharynx. Marked hoarseness was present in five cases. Of these, two had granular pharyngitis, one a fibro-papilloma of cord, and two had irregular congested and thickened cords.

He concludes that certain forms of throat disease are common among female teachers in elementary schools ; that laryngeal strain is an important symptom ; that (having inspected the schools) the most potent factor in the production of these throat affections is the absence or paucity of class-rooms and the consequent necessity of holding two or more "noisy" or "oral" lessons simultaneously in the same room (he quotes two cases whose history points to this cause) ; that there are other contributory causes, such as deficient acoustic properties in class-rooms, floors made of boards instead of wooden bricks (which deaden the sound of moving classes), suspended particles of chalk in the air, too large classes, ignorance of the elements of voice production, and the commencement of the duties of a teacher too early in life.

*R. M. Fenn.*

## THYROID, &C.

**Clarke, Bruce.**—*A Case of Gumma of the Isthmus of the Thyroid Gland; Ulceration; Œdema of the Larynx; Laryngo-Tracheotomy; Recovery.* "Lancet," Aug. 14, 1897.

VERY few cases of gummata of the thyroid gland have been recorded. Demme has met with the condition in hereditary syphilis, and Wölfler mentions a case recorded by Navratil. In the present case a woman, aged thirty-eight, who had previously been treated for syphilis, was admitted for fever and dyspnoea. In the mid-line of the neck anteriorly there was a hard cylindrical swelling, extending from the hyoid bone to the top of the sternum, so that the thyroid and cricoid cartilages could not be felt. The swelling moved with deglutition. Its upper part was ulcerated and typical of a gummatous ulcer. With the laryngoscope the mucous membrane of the larynx appeared to be very red, but not markedly cedematous. Iodide of potassium was administered, but the patient grew rapidly worse; dyspnoea increased, and the left side of the larynx became very cedematous. During an attack of severe dyspnoea laryngo-tracheotomy was performed without anæsthetic. The cricoid cartilage and the upper two or three rings of the trachea were cut through after dividing a thickness of one and a half inches of hard gummatous material. The patient recovered and was able to dispense with the tracheotomy tube. No signs of myxœdema had appeared six months later.

*StClair Thomson.*

## E A R.

**Field, G. P.**—*Aural Hyperostoses.* "Lancet," July 3, 1897.

CONSIDERS cold water getting into the ears as a usual factor in the production of these growths. Warmly recommends the dental drill as the most suitable instrument for their removal. There is no tendency to recurrence of the obstruction, so that a favourable prognosis in case of removal is always fully justified.

*StClair Thomson.*

**Smith, S. MacCuen.**—*Mastoid Empyema without the Usual Objective Symptoms.* "The Therapeutic Gazette," Aug. 16, 1897.

THE author records four cases of acute mastoid suppuration—out of nine which he has observed—in which none of the usual symptoms (redness, swelling, and tenderness over the mastoid) were present. In all of them the one symptom was severe pain confined to the occipital region, and unrelieved by the free escape of pus through the ruptured or incised membrana tympani. In every case opening the mastoid evacuated a quantity of pus, which relieved the suffering, otorrhœa, and other symptoms.

The author draws the following conclusions from his cases:—(1) That redness, swelling, and tenderness over the mastoid are not necessarily diagnostic of deep mastoid disease, but are frequently secondary manifestations of a furunculous inflammation of the external auditory canal. (2) That bulging of the postero-superior quadrant of the external canal, especially when accompanied by otorrhœa, is always diagnostic of mastoid empyema, and demands prompt surgical interference. (3) That a consideration of the pulse and temperature are of much value in some cases, while in others they are totally unreliable, even misleading and confusing. (4) That in otherwise more or less obscure cases the presence of occipital pain is of commanding diagnostic importance.

*Middlemass Hunt.*

## REVIEWS.

**James.**—*Rheumatism and its Treatment by the Use of the Percusso-Punctator.*

By J. BRINDLEY JAMES, M.R.C.S.Eng., etc. Second Edition. (London: The Rebman Publishing Co., Ltd. 1897.) Pp. 39. Price 2s.

THE author re-describes his treatment of lumbago, sciatica, various neuralgias, etc., by a very simple instrument, which he has invented for facilitating the process of multiple acupuncture and curtailing expenditure of time. The apparatus employed by the author can be carried in the pocket; it consists of a small ivory handle bearing a metal cap, through perforations in which the needles employed for the acupuncture can be made to project for the desired length. The instrument can be connected with a battery when the electric current is employed.

A method of treating sciatica and lumbago by the injection of sulphuric ether is likewise advocated, in combination with a brisk purge at the outset, and a mixture consisting of five grains of salicylate of soda with a little chloric ether and tincture of ginger in one ounce of infusion of gentian, to be taken every four hours. The author expresses his conviction in the following words:—"In not one solitary case have I found this system prove a curative failure." This is a recommendation almost more encouraging than one would desire to hear of any method of treatment. We cannot quite understand what the remarks on pessimism and the Paris Commune have to do with the author's subject.

**Ball.**—*A Handbook of Diseases of the Nose and Pharynx.* By JAMES B. BALL, M.D. Lond. (London: Ballière, Tindall, & Cox, 20 and 21, King William Street, Strand.)

THIS is the third edition of the work, and the author has carried it out very much on the same lines as the previous two editions. In his preface he states that while he has made many alterations and corrections he has abstained from adding to the length of the book, and, with this object in view, he has avoided theoretical discussions and some of the rarer affections. Dr. Ball's aim throughout is to present within moderate space such an account of the symptoms and treatment of disease as might be useful to the practitioner and senior student. From these standpoints it may at once be said that Dr. Ball's work is to be recommended. The general arrangement is good, the illustrations have been well chosen, and senior students will find it a useful introduction to the affections of these special organs.

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*Latent Empyema of Maxillary*—LACROIX, *Concours Méd.*, Jan. 16, '97. *Empyema of Maxillary*—BERCHAUD, *Lyon Méd.*, Mar. 14, '97.

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*Retro-pharyngeal Abscess*—MUNGER, *Laryngos*, II., '97, 343. *Mucous Polypi of*—BROCA, *Gaz. Hebd. Paris*, Jan. 14, '97. *Naso-pharyngeal Catarrh in Children*—COURBY, *Méd. Mod.*, Feb. 3, '97.

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*Advanced Method in Teaching the Deaf*—ARTIER and ASCHHINASI, Bull. Polyclin. Hosp. Intern. Jan., '97. *Oto-Massage*—Chevalier JACHISON, Laryngos, II., '97, 26. *Importance of Examining Hearing in Schools*—J. CHAMBELLAIN, Journ. de Clin. Infant., Feb. 4, '97. *Functional Examination of*—MOURE, Journ. Méd. Bordeaux, Mar. 14, '97.

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*Cerebral Abscess*—REGNIER, Bull. Soc. de Chir., XXIII., 81. *Cerebellar Abscess*—RIOT, Presse Méd., Jan. 6, '97. *Phlebitis of Lateral Sinus and Septic Pyæmia*—RIVIÈRE and ETRÉVANT, Arch. Int. de Lar., X., 29; VILLARD, Lyon Méd., Mar. 28, '97; LACHARRIÈRE, Rev. Hebd. de Lar., Mar. 6, '97. *Thrombosis of Lateral Sinus*—N. L. WILSON, Laryngos, II., '97, 35.

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At a Meeting of the BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION, July 16th, 1897, the following officers were elected for the ensuing year—President: Dr. DUNDAS GRANT. Vice-Presidents: Mr. F. MARSH, Mr. G. C. WILKIN, Dr. J. DAVISON, Council: Dr. W. MILLIGAN, Dr. A. B. KELLY, Mr. V. H. WYATT WINGRAVE, Dr. W. HILL, Mr. P. JAKINS, Dr. H. WOODS, Mr. LAKE. Hon. Treasurer: Dr. MACNEIL WHISTLER. Hon. Secretaries: Mr. STGEORGE REID, Dr. F. POTTER.

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**REPORT OF THE PROGRESS MADE IN THE TREATMENT  
OF LARYNGEAL TUBERCULOSIS SINCE THE LAST  
INTERNATIONAL CONGRESS.<sup>1</sup>**

By J. W. GLEITSMANN, M.D. (New York),

Vice-President of the Laryngological Section of the International Medical Congress; Professor of Laryngology and Rhinology, New York Polyclinic;

Chairman of the Section of Laryngology of the New York Academy of Medicine; Laryngologist to the German Hospital and Dispensary, etc.

WHEN I was honoured by the Committee of our Section with the request to open, jointly with Dr. Ruault, the discussion on the progress in the treatment of laryngeal tuberculosis, I was of the opinion that it would facilitate our work, and enhance the value of our contribution, if, with the magnitude of the subject before us, a division of the different topics could be arranged, as in this case each of us could devote himself entirely to the task assumed, and unavoidable repetitions would be obviated. As Dr. Ruault has expressed the desire to treat the subject in its entirety, I apologize beforehand if I should tread upon ground already covered in his discourse.

It is my intention to give in this report a critical review of the development of the treatment of laryngeal tuberculosis, to mention in this connection the remedial agents introduced since the last International Congress, and to conclude with remarks on the surgical treatment, to which I have paid attention since several years. In this manner I hope to keep my paper within reasonable limits, to avoid repeating what has already been said, and to be able to present one or two new contributions to the treatment, which I shall submit to your consideration and criticism.

<sup>1</sup> Paper read by invitation to open the stated discussion on laryngeal tuberculosis in the Section on Laryngology and Rhinology of the Twelfth International Medical Congress, Moscow, August 20th, 1897.

The time is certainly within the memory of several of us when laryngeal tuberculosis was considered a *noli me tangere*, and was best left alone. Fortunately, this period has passed by never to return, although the results obtained, and our power to effect a cure, are still more limited than the exertion and the devotion of many of our best men to this special subject would merit. But if our earnest efforts fail sometimes, we must not forget, as Semon<sup>1</sup> very appropriately says, when speaking of the prognosis of laryngeal tuberculosis, that it is merely a local manifestation of a general infectious process, and that we cannot promise to cure the latter, even when successful in arresting for a time the laryngeal complication. On the other hand, we have learned, and feel justified to subject to treatment, and, if necessary, to use energetic means, in patients in whom we know beforehand that a cure is impossible, but whose sufferings we feel called upon to relieve. The fact that we are now able to give relief, even when we cannot cure, is certainly, in a great measure, due to our modern methods of treating laryngeal tuberculosis. When I make this statement I do not mean to underrate in the least the brilliant results obtained by many of us, which terminated in a permanent cure of the larynx in a number of cases by employment of different means. But the proportion of cases cured to the vast number of sufferers is very small, and many whose larynx ultimately healed succumbed to the concomitant pulmonary disease. Let us hope that the efforts made now in all parts of the globe to master the latter may before long be crowned with success, when we can expect that the number of hopeless laryngeal cases will decrease, and our work be less subjected to criticism than at the present time.

The treatment of laryngeal tuberculosis can, in my opinion, be very properly divided into three chapters: the medicinal, the local, and the surgical treatment—although a combination of two, or of all three methods, is often advisable and necessary.

As to the employment of medicinal agents, I always endeavoured to improve the general and the pulmonary conditions, thereby influencing favourably the laryngeal lesion. I cannot share the absolute negation of the utility of the creosote preparation, as stated by Stoerk,<sup>2</sup> but prefer to give the carbonate combinations; and have seen improvement follow after the use of carbonate of guaiacol, and, still more, benzosol, especially at the beginning of the disease. Leaving the other well-known drugs out of consideration, I have also tried to treat a number of my patients with injections of tuberculin and its products, and with serum. The tuberculin injections made years ago did not satisfy me, although I am not prepared to deny their value in pulmonary affections, if properly used. Antiphthisin did not give me any better results in laryngeal tuberculosis, and I must say the same about the antitubercle serum of Paquin, of St. Louis, Mo. But it is only fair to state that Von Ruck, of Ashville, N.C., has seen very good effects from antiphthisin, and that, besides Paquin, Loeb, of

<sup>1</sup> Semon, F. A Clinical Lecture on Laryngeal Tuberculosis. "Clinical Journal," Jan. 3rd and 10th, 1894.

<sup>2</sup> Stoerk. Ueber die Kreosottherapie bei Tuberculose des Kehlkopfs und der Lungen. "Archiv fuer Laryngologie," Band I., Heft 2, p. 208.

St. Louis, Mo.,<sup>1</sup> reports favourably about Paquin's serum in laryngeal tuberculosis. One of his patients, with pulmonary infiltration and laryngeal ulceration, was relieved by injections of serum after five months, without any other general or local medication. I have no experience with Maragliano's serum, and the new tuberculin of Koch is of too recent a date to allow of any report on its definite value.

Under local or topical treatment I understand atomization, inhalation insufflation, injections, and pigments. The three agents named first will always retain their place in the therapeutics of laryngeal tuberculosis; and inhalations and insufflations have been for some time, and are even now, employed as curative agents, although Hajek<sup>2</sup> says that he has never seen an ulcer of undoubted tuberculous nature heal from the application of antiseptics alone. You will spare me their enumeration, the more so because I have no new drug to add to the list. Rosenberg's injections of menthol in olive oil are known to all of us. Recently, Botey,<sup>3</sup> who began experimenting as early as 1890, claims to have seen improvement from tracheal injections of creosote and guaiacol in laryngeal and pulmonary tuberculosis. He injects a one per cent. to two per cent. solution in olive oil with a suitable syringe, in doses gradually increasing from three to twenty grammes. His statement of the results obtained is as follows, viz.: that in more than half the number of patients the pulmonary symptoms had remained stationary, the expectoration and the cough had lessened, and the general nutrition improved. About half the number of patients he claims to have cured by two months' treatment. Similar data are given by Barton,<sup>4</sup> who gave intratracheal injections of benzoinol, euophen, and menthol to ten patients, three of whom had pulmonary phthisis, with considerable improvement. I have also used these injections, with agreeable results, in chronic bronchitis and tracheitis, but confined myself to atomization of these compounds in laryngeal tuberculosis, considering these remedies less effective for a cure than for an amelioration of distressing symptoms, which purpose they fulfilled.

Of all the remedies applied locally in the larynx—and we might almost say, of all the means employed in the treatment of laryngeal tuberculosis—none enjoys such universal consensus of opinions as to its efficacy as the application of lactic acid, introduced by Krause in 1885; and it is gratifying to note that there is an equal harmony in regard to the manner of its application, as well as to the indications for it. Scepticism is for once subdued; and as much as one may feel disappointed in the value of a remedy, and criticise its indications, which has proved useful in another's hand, Krause's discovery has, to my knowledge, no opponents at present.

Similar results have been observed from the use of sulphuricinate of phenol, which has found an ardent advocate in my honourable *confrère*,

<sup>1</sup> Loeb. Experiences with Paquin's Antitubercle Serum in the Treatment of Laryngeal Tuberculosis. "New York Med. Journ.," Oct 5th, 1895.

<sup>2</sup> Hajek, M. Die locale Behandlung der Kehlkopftuberculose. "Centralbl. fuer die gesammte Therapie," Wien, 1895, Vol. XIII., p. 127.

<sup>3</sup> Botey, R. Les Injections trachéales de Créosote et de Guaiacol dans la Tuberculose laryngopulmonaire. "Annal. des Mal. de l'Oreille," Janvier, 1897, p. 26.

<sup>4</sup> Barton. Diseases of the Trachea, Bronchi, and Lungs treated by Intratracheal Injections. "Med. Rec.," Aug. 1, 1896.

Ruault,<sup>1</sup> whose report, based on extensive and painstaking studies, is before you. I have nothing to add to his remarks, except that his statements are supported by others, amongst them Heryng,<sup>2</sup> who also found that it does not only promote healing of tubercular ulcerations, but also absorption of infiltrations.

Another remedy which has been tested by a number of colleagues has been recommended by Simanowsky,<sup>3</sup> and Spengler,<sup>4</sup> of St. Petersburg, viz., parachlorphenol. The former says that superficial nodules and ulcerations disappear quickly after a few applications, and that deeper ulcers and large infiltrations require treatment of several months. The solutions he employs are from five to twenty per cent. parachlorphenol in glycerine, and he claims that they exert their beneficial influence by penetrating into the depth of the tissues themselves. His views are corroborated by Spengler, Zinn,<sup>5</sup> Hedderich,<sup>6</sup> and others. Zinn praises the remedy very highly and considers it an important addition to our therapeutic means. It has also a long-lasting anæsthetic effect after the first pain from the application has subsided. In the discussion following Hedderich's paper, divergent views were brought forward by Lublinski and Seifert, who found the remedy too painful, and of no better effect than creosote or chloride of zinc. From a limited experience I can testify to the efficiency of parachlorphenol, but in a few cases the infiltrations would not yield, and I had to have recourse to curettement.

Quite recently, in a paper read before the American Laryngological Association at Washington, last May, Murray spoke of a new preparation, called enzymol, as a most valuable auxiliary to the curette and lactic acid. In his remarks he said that it was non-irritating, and possessed in a high degree the quality of digesting necrosed tissue. He applied it to a large ulcer upon the ventricular band, and in twenty-four hours the detritus with which the ulceration was covered had entirely disappeared, leaving a perfectly clean surface, upon the face of which were two nodular projections, apparently tubercular deposits which had not yet undergone the process of ulceration.

The last part of our subject, the surgical treatment, is the most modern and radical measure, and consequently more subject for criticism than the previous ones. It comprises different procedures, viz.: (1) incision; (2) curettement; (3) submucous injections; (4) electrolysis; (5) galvanocautery; (6) laryngotomy; (7) laryngectomy; (8) tracheotomy; and (9) intubation. The endolaryngeal measures, and of these the curettement, are naturally of the greatest interest to us; and although with one exception—which will be stated later on—no important new discoveries

<sup>1</sup> Ruault. *Le Phénol Sulforiciné dans la Tuberculose laryngé.* Paris, G. Masson, 1895.

<sup>2</sup> Heryng. *Ueber Phenolum sulfo-ricinicum und seine Anwendung bei tuberculoesen und chronischen Erkrankungen des Rachens, des Kehlhofs, und der Nase.* "Therapeut. Monats," Nos. 3, 5, 7, 1896.

<sup>3</sup> Simanowsky. *Ueber die Behandlung phthisischer und anderer Erkrankungen der oberen Luftwege mit Ortho- und Parachlorphenol.* "Therapeut. Monats," No. 3, 1894.

<sup>4</sup> Spengler. "Archives des Sciences biologiques," St. Petersburg, Tome IV., Vol. 1.

<sup>5</sup> Zinn. *Ueber die Behandlung tubercul. Kehlkopfserkrankungen mit Parachlorphenol.* "Charité Annalen," Berlin, 1896, p. 204.

<sup>6</sup> Hedderich. *Klinische Erfahrungen neber Paramonochlorphenol bei Larynx Phthise.* "Muench. Med. Wochensh.," 1896, p. 749.

have been reported, as far as my knowledge goes, the number of opponents has lessened, the indications are more clearly defined, and a better judgment as to the results obtainable prevails.

Curettement, which was favourably spoken of by fifteen members of the Laryngological Section of the International Congress at Rome, has since made many converts, and it is a source of great pleasure for me to be able to say that it has also been more frequently employed in the United States within the last few years. Two years ago a general discussion on laryngeal tuberculosis took place at the meeting of the American Laryngological Association in May,<sup>1</sup> when the reader was assigned to speak about the surgical treatment; and later, in July, he was allowed to contribute his mite on the same subject before the British Laryngological Association,<sup>2</sup> after listening to the excellent essays of Krause and Heryng. From this time dates the greater familiarity of the American profession with surgical treatment; and although its adoption is but slowly progressing, I know, from personal and other communications with medical men and instrument makers, who supply the instruments in increasing numbers, that curettement has taken a firm foothold also in the Western Hemisphere.

The reasons why curettement is slow to find general recognition in suitable cases are, in my opinion, twofold: first, we are only too often confronted with the impossibility to eliminate the almost always concomitant pulmonary disease to which, ultimately, the majority of sufferers succumb; second, the difficulty to remove all the tissue which is diseased, and to prevent relapses.

As to the first objection, the laryngologist is in the same position as the surgeon in similar cases. The latter does not hesitate now to excise a tuberculous articulation, without hoping to cure thereby the tuberculous diathesis; but he removes, by his operation, a constantly threatening focus of infection. He makes gastrostomy in cancer of the pylorus without expecting to influence the malignant growth, but with the assurance that by the introduction of nourishment the tortures of starvation will be avoided, and the patient's life prolonged. Operations with such an object in view are not only justifiable, but also imperative for the surgeon as well as for the laryngologist.

The second objection—as to the difficulty of removing all the diseased tissue—cannot be sustained if the cases are properly selected. It is true that we often labour under the disadvantage of not being able to excise the tuberculous infiltrations until we reach healthy tissue. But I believe that Pieniasek,<sup>3</sup> in his excellent monograph on laryngotomy, goes too far when he limits curettement, first, to cases in which there are no or only small infiltrations of the lungs; second, to such in which the laryngeal lesions are so circumscribed that they can be easily and thoroughly removed, taking away at the same time a part of the neighbouring healthy tissue.

<sup>1</sup> Gleitsmann. "Transactions of the American Laryng. Assoc.," 1895, p. 132.

<sup>2</sup> Gleitsmann. "Transactions of the British Laryng., Rhinol., and Otolog. Assoc.," 1895, pp. 71-88.

<sup>3</sup> Pieniasek. Ueber die Laryngofissur auf Grundlage eigener Erfahrung. "Deut. Zeitschrift für Chirurgie," Vol. XXXVI., p. 342.

We know that one curettement is seldom sufficient in a given case, and we should feel encouraged by the successful efforts of Hajek,<sup>1</sup> who ultimately cured the larynx of a patient after having operated endolaryngeally twelve times before the granulations of the vocal cords and intra-arytenoid region were completely removed. In his paper he also emphasizes a point to which I attribute great importance, viz., to individualize and to discriminate in each particular case before curettement is decided upon. Some patients, he says, bear cocaine badly—lose their appetite; with others it is followed by fever and general depression. Rethi<sup>2</sup> is of the same opinion. He writes about a patient with a moderate infiltration of the intra-arytenoid fold and right vocal band who became aphonic two days after curettement; severe dysphagia set in, the wound did not heal, and perichondritis developed with subsequent *exitus*. I had a similar case this spring, in which I considered curettement eminently in place, and in which it was also indicated on account of dysphagia. The excision of the intra-arytenoid region was easily accomplished, but the wound covered itself with a tenacious greyish deposit, which would not yield to local application. The sufferings of the patient were rather increased than lessened, and his death possibly accelerated by the well-meant operative interference. It is extremely doubtful if we will ever be able to foretell in each individual case the accidents that may befall a patient whom we conscientiously believed a fit subject for curettement; but by following the indications to be stated, we are guarded, in the majority of cases, against mishaps which may otherwise occur.

As to relapses, we will not be able to forestall them by curettement, but if rightly adopted and properly executed they will not be more, but rather less, frequent than with other methods of treatment. We have at present no remedy which is an absolute safeguard against relapses in so treacherous and misleading a disease; but we are entitled to hope that the remedies which have promoted absorption of tuberculous infiltration so successfully without operative interference will also materially assist in the elimination of diseased tissue unavoidably left after curettement, as well as prevent too frequent relapses.

I crave your indulgence for the lengthy remarks just made, which contain nothing new to a body of men whom I have the honour to address. But curettement has more adversaries at large than we may perhaps believe, and I thought it only right that a positive declaration of its propriety and utility should be made on this occasion, which, with the discussion following, will have more weight and find more recognition than when made in a smaller circle.

Through the efforts of many of our best men, whose number is too large to name, the indications for curettement are now more clearly defined than they used to be. Theodor Heryng, your countryman—whom we can well call the father of surgical treatment, and who, by his numerous publications and indefatigable efforts, has probably contributed more than any of us to destroy the fallacy of the incurability of laryngeal tuberculosis—

<sup>1</sup> Hajek. *Loc. cit.*

<sup>2</sup> Rethi, L. Bemerkungen zur chirurgischen Behandlung der Kehlkopftuberculose. "Wiener Klinische Wochenschrift," 1895, p. 738.

has in two recent publications<sup>1</sup> written fully about the indications and contraindications for curettement, the precaution we have to use in its execution, and the results we are entitled to expect. His views are the same as I expressed in my paper heretofore mentioned, with the only exception that I do approve of curettement as a measure for relief in advanced phthisis, when the dysphagia is so severe as to prevent the patient from taking nourishment—a view which also Krause corroborated in his remark before the British Laryngological Association, 1895, giving at the same time a very good illustration of its benefit in a case of this nature. I, therefore, consider curettement indicated—

1. In cases of primary tuberculous affections without pulmonary complications, in one of which, at least, I have prevented the infection from extending to the lower air passages and restored the patient to health, after a severe and prolonged struggle, over eight years ago.<sup>2</sup>

2. In cases with circumscribed ulcerations and infiltrations of the larynx.

3. In cases with dense, hard infiltrations of the arytenoid region of the posterior wall, also of the ventricular bands, and tuberculous tumours of the epiglottis.

4. In the incipient stage of pulmonary diseases, with but little fever and no hectic symptoms.

5. In advanced pulmonary disease, with distressing dysphagia resulting from infiltration of the arytenoids, as the quickest means to give relief.

As the last indication stated may possibly incur more opposition than the others, I feel constrained to state that it was always a great source of satisfaction to me when I was able to relieve a sufferer—though I knew his days were numbered—from the tortures he had to endure. In such cases I know of no procedure which acts so rapidly and effectually as curettement, and it is surprising how well such patients bear the operation, and how quickly the wound heals even in an advanced stage of the disease.

The contraindications for curettement are :—

1. Advanced pulmonary disease and hectic.
2. Disseminated tuberculosis of the larynx.
3. Extensive infiltrations, producing severe stenosis, when tracheotomy is indicated, or laryngotomy can be taken into consideration.

I fully agree with Heryng not to advise the operation in timid, distrustful patients, lacking the necessary nerve power, and, like him, prefer to operate upon the patient in a hospital, where he is under absolute control, and the after treatment can be carried out more satisfactorily.

The technique of the operation has been greatly facilitated by Heryng's rotary double curette, which, although published before the last International Congress,<sup>3</sup> ought not to be left unmentioned in a treatise on this

<sup>1</sup> Heryng. Result of the Surgical Treatment of Laryngeal Phthisis, based on 252 cases. "Journal of Laryngology," Aug. and Sept., 1893; April, May, and Aug., 1894.—Ferner: Beiträge zur chirurgischen Behandlung der Larynxphthise. "Klinische Zeit und Streitfragen," Wien, 1894, Band VIII., Heft 2.

<sup>2</sup> Gleitsmann. Ein Fall von geheilter primärer Pharynx-tuberculose. "Verhandl. des roten Internat. Congresses," Band IV., Abtheilung 12, p. 151.

<sup>3</sup> Heryng. Eine drehbare Universalcurette fuer endolaryngeale Operationen. "Therap. Monats.," July, 1893.

subject. Gouguenheim constructed an instrument, which he called "*emporte pièce*," which, being larger than Krause's curettes, enables him to remove a greater amount of tissue. The instrument is mentioned in his report at the last Congress.

Two years ago, in London, Heryng spoke at length about the details of the technique of curettement, and showed elaborate drawings, which, by his permission, I present to the section. They are so well executed and so plain in their conception that I deem further remarks unnecessary.

Of the other surgical measures, there are only a few about which I shall make some comment. Submucous injections of lactic acid gave me satisfactory results in a number of cases in which curettement was either objected to or considered inappropriate.

Only two months ago I was spared, in all probability, a disagreeable experience by a submucous injection, while preparing a patient for curettement. I intended to use the double curette, and to excise both arytenoid regions, of which the right one was slightly ulcerated, and felt softer to the touch of the cotton carrier, when applying cocaine, than the left one. As a number of applications did not produce the desired local anæsthesia, I injected cocaine with a laryngeal syringe into the right arytenoid swelling, when a continuous and prolonged hæmorrhage followed. I naturally desisted from curettement, and injected in both sides a fifty per cent. solution of lactic acid. The result was that the hard, dense, left portion sloughed away almost completely after a week, leaving a healthy surface, and the right arytenoid meanwhile became smaller and firmer, and allowed curettement without any untoward accident, greatly to the relief of the patient, who had not swallowed solid food for several weeks previously.

Chappell, of New York, has used the creosote treatment in his clinic during the last two years in the form of sprays, pigments, and submucous injections. For the latter he uses wintergreen and castor oil as a vehicle, in the proportion of one drachm creosote to the ounce, which he injects with an automatic syringe devised by himself, and which I present to your inspection. His results are embodied in two reports,<sup>1</sup> which he supplemented by a verbal communication as follows. Of the first series of seven patients, four are alive; of the second series of thirty-two patients, eight are alive. Including the four of the first series, ten had relapses, five died, and nine unknown. Of twelve patients seen after publication of his reports, one had a considerable ulceration of the larynx, which healed entirely; five showed marked improvement; of two he has no further information; and five lost the improvement previously gained. As I have not practised the local creosote treatment I have no personal experience, and must confine myself to reporting what has been communicated to me.

To the subject of electrolysis belongs cataphoresis, which I have to offer as a new contribution to the treatment of laryngeal tuberculosis by

<sup>1</sup> Chappell. The Treatment of Laryngeal Tuberculosis by the Application and Submucous Injection of Creosote. "New York Med. Jour.," March 30th, 1895.—Observations on the Creosote Treatment of Tuberculosis of the Upper Air Passages. *Ibid.*, May 9, 1896.

Scheppegrell,<sup>1</sup> of New Orleans. Last May, after having tried several substances, he finally decided to use electrodes made of chemically pure copper, finding that the oxychloride of copper is a salt possessing marked germicidal properties, while exerting at the same time a stimulating effect on the pathological tissues. A five per cent. spray of cocaine is sufficient for local anæsthesia; the current must be weak, rarely over five milliampères, and the copper electrode is to be connected with the positive pole—the negative pole with a large dispersing electrode to the neck. The applications are made, as a rule, every second day. To obviate laceration of the tissues during movements of the larynx, and to prevent infections by punctures made by needles, he constructed spherical electrodes, which he found efficient for cataphoresis, and, when properly applied, to give rise to no pain, irritation, or reaction. I brought the instruments with me, and offer them to you for inspection. Scheppegrell found autoscopy a valuable help when applying cataphoresis, and claims for the latter:—

1. That there is no real destruction of the tissues, nor lacerations of the surfaces.
2. That there is absolutely no reaction, no hæmorrhage.
3. That this method does not demand the high degree of skill required for curettement, and is especially simple when used with the autoscope.
4. That it is applicable to all cases of laryngeal tuberculosis.

Scheppegrell gave the history of three patients treated with cupric cataphoresis in his paper, to which he added four more cases in a letter to the writer, dated June 1st. All his patients had pulmonary complication. In three cases the treatment had to be discontinued on account of the advanced stage and weakness of the patient. In two recent cases the ulceration and infiltration of the arytenoid region subsided, and the dysphagia was relieved. The first patient he treated was similarly affected, but after seven applications he was so much improved that he went into the country, from which he returned, after six weeks, with his pulmonary trouble aggravated, but with no recurrence of laryngeal ulceration. His third patient suffered for seven months from tubercular laryngitis, and had, in addition to ulceration and infiltration of the arytenoid region, also tumefaction of the epiglottis. After eleven applications the ulcerations had entirely healed, enabling the patient to take solid food without pain. And eight weeks later, with bi-weekly applications, the infiltrations also had disappeared. The improvement was lasting, and verified six months later, when the larynx showed no return of the previous disease.

The number of cases is too limited and the time of observation too short to allow a definite opinion of the value of this method. But its application is so simple, and the results are sufficiently encouraging, to merit further investigation and trial.

Laryngotomy and tracheotomy in laryngeal tuberculosis have been the subject of two essays which deserve a passing notice. Crepon<sup>2</sup> has

<sup>1</sup> Scheppegrell, W. The Treatment of Laryngeal Tuberculosis with Cupric Interstitial Cataphoresis, with Report of Cases. "Medical Record," May 29th, 1897.

<sup>2</sup> Crepon, Ernst. Die Behandlung der Larynx tuberculose durch Laryngofissur. Marburg, 1894.

collected seventeen cases of laryngotomy from the literature, to which two have to be added, published by Lohoff,<sup>1</sup> and two performed by Pieniazek.<sup>2</sup> Four of Crepon's cases got worse after operation, four were temporarily relieved from their sufferings, but ultimately died from the pulmonary disease, seven experienced remarkable improvement of their ailment, and also of their general condition. One patient, operated by Hopmann, was still able, after eleven years, to preach in a loud although somewhat hoarse voice. One case, reported by Lohoff, died immediately after the operation; the other, with infiltration of both lungs, was in fair health three years after the operation. Of Pieniazek's patients, one died five days, the other eighteen months, after the operation. The latter considers laryngotomy indicated when the lesions are localized in the region of the glottis—therefore in affections of the vocal cords, the arytenoid regions, and especially of the subglottic space. As he says that laryngotomy ought only to be made in a relatively good condition of the lungs, the number of suitable cases will naturally remain small, as we see, unfortunately, a well-developed pulmonary disease in the majority of our patients.

In his treatise on tracheotomy Lohoff does not consider it a curative measure, nor does he approve of it being only made as a last resource. He coincides with the generally accepted view that it is indicated in stenosis and dyspnœa, but in such cases without reference to the pulmonary condition.

If, in conclusion, we allow all that has been said to pass in review before our mind, we are compelled to acknowledge that, during the last few years, not only satisfactory progress in the treatment of laryngeal tuberculosis has been made, but also that in many directions diligent efforts are being made to overcome our deficiencies and to improve our methods. But let us at the same time keep in mind the well-meant words of Kuttner, viz., that laryngotomy can very well recognize laryngeal tuberculosis in its initial stage, but that we seldom see a patient at the commencement of the disease. When the necessity of an early interference will be more fully accepted, when the better results obtained at this stage will be more generally recognized, then also the laryngologist will find his task easier, and earn, with greater satisfaction to himself, the well-deserved rewards for his labours.

<sup>1</sup> Lohoff, B. Ueber Tracheotomie bei Larynx tuberculose. Wuerzburg, Scheiner, 1894.

<sup>2</sup> Pieniazek. *Loc. cit.*

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## SOCIETIES' MEETINGS.

### BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

DUNDAS GRANT, M.D., F.R.C.S., *President, in the Chair.*

*Friday, October 29th, 1897.*

#### LARYNGOLOGY AND RHINOLOGY.

MR. GRIFFITH C. WILKIN showed *A Case of Lupus of the Nose and Mouth.*

Dr. WHISTLER agreed with the diagnosis of lupus rather than of syphilis, in view of there being no specific history, no improvement from antisyphilitic treatment, and no destruction of bone.

The PRESIDENT showed *Three Cases of Frontal Headache dependent on Frontal Sinus Disease.*

Case 1.—An engineer, aged twenty-eight, came under my observation on June 28th, 1897, on account of left frontal headache accompanied by discharge from the left nostril. On *transillumination* there was found marked comparative *obscurity* on the left side, suggesting the presence of pus in the antrum of Highmore, but *Lichtwitz's* method of exploratory irrigation gave a negative result. A diseased tooth was also removed without making any difference. The anterior part of the left middle turbinated body was removed according to Grünwald's method, and for a time the symptoms were somewhat alleviated. On October 14th Hartman's tube was passed through the natural orifice, and when air was blown through it the patient was distinctly conscious of its reaching the frontal region. A very small quantity of muco-pus presented itself round the tube, and a certain amount of relief was obtained, which was still more marked when a one per cent. solution of menthol in parolein was injected by means of a syringe. The headache has diminished but not yet disappeared.

*A Case of Frontal Headache depending upon Sphenoidal Sinus Disease.*

Case 2.—Miss D., aged twenty-nine, came under my care in 1888, complaining of severe frontal headache, most marked in the left side, the pain being continuous and of extreme severity. The left middle turbinated body was covered with polypoid outgrowths, which I repeatedly endeavoured to remove in their integrity, but without complete success, there always remaining a considerable amount of new growths which the snare failed to grasp. A slight degree of relief from the headache was, however, obtained. It was not until on a later occasion a large mass of polypoid outgrowth detached itself from the interior of the nose during syringing, and was found to be growing from a thin plate of bone which came away with it, that complete relief was obtained. There was then found a large

opening leading into the sphenoidal sinus, and the plate of bone which had come away was obviously the anterior wall of the cavity. In this case the frontal headache depended on disease of the sphenoidal sinus. The more recent history of the case is of considerable interest, but does not bear upon the subject.

*A Case of Right Frontal Headache, due to Suppuration in the Antrum of Highmore.*

Case 3.—Miss S., aged fifty-one, a housekeeper, was referred to me by Dr. de Watteville on account of pain over the right side of the head, extending from the frontal to the occipital region, and accompanied by a continuous discharge from the nose for two or three months. The latter was, however, very inconspicuous, and Dr. de Watteville was led to suspect the nose as the seat of origin of the pain by the offensiveness of the patient's breath. The nasal discharge was worse in the erect posture, and ceased in the recumbent one. There was a polypoid enlargement of the right middle turbinated body, deviation of the septum, and pus, not merely in the middle meatus, but between the turbinated body and the septum. The description of the symptoms suggested the probability of there being suppuration in the right frontal sinus. On transillumination there was found distinct darkness below the right eye, and Lichtwitz's exploratory puncture evacuated a quantity of intensely foetid pus, with complete removal of the symptoms. On two or three successive occasions the irrigation was repeated, with the result of complete disappearance of the pus. Since then the patient has enjoyed almost continuous immunity from pain, and the discharge has totally disappeared, there being simply a slight drying of the mucous membrane.

REMARKS ON PRESIDENT'S CASES.

Mr. LENNOX BROWNE remarked that the great interest of the cases was in the suggestion that frontal headache was the most prominent symptom of pain in diseases of the accessory sinuses, and with that he expressed general agreement.

The cases also suggested that hard-and-fast lines as to diagnosis by localization of pain of the particular cavity attacked, by the seat of the pain, which had been rather dogmatically laid down by certain authors—albeit they were not always in agreement with each other—were not to be relied upon, and in this view he also agreed.

With regard to the case of empyema of the maxillary antrum, while he congratulated the President on the reported cure by what would generally be considered tentative measures, he thought the explanation lay in the fact that the empyema was a sequel of influenza. This also, being the cause of more acute inflammation than is ordinarily seen, might explain the presence of pain, a symptom rarely existing in the chronic form, which more usually comes under the care of the surgeon.

Mr. BARK congratulated the President on the easy method of cure. He had always had to use more radical measures in these cases.

Mr. F. MARSH, referring to the case of sphenoidal sinus disease, said that in three well-marked cases of suppuration of the sphenoidal sinus which had occurred in his practice, there was severe headache, referred

vaguely to the vertex, the patients having difficulty in indicating the region of the sinus on the cranial surface. Frontal headache was also complained of by all three, but was attributed to a similar affection of the ethmoid cells.

The PRESIDENT replied that in regard to the maxillary antrum case he had not anticipated that a cure would result, and suggested the possibility that the pus might have gravitated from elsewhere into the antrum, the original source of the pus having undergone spontaneous cure. This was, however, a very far-fetched explanation to which he attached very little importance.

The PRESIDENT showed *A Case of Malignant Disease of the Œsophagus and Thyroid Gland.*

Mr. S., aged fifty-nine, was referred to me recently on account of a swelling occupying the region of the thyroid gland. It was of intense hardness, extending mostly to the left side, and although it rose in swallowing, this movement was not so free as in the case of ordinary growths of the thyroid gland of the same size, and it had developed completely within five or six weeks. There was slight tracheal stridor, but no paralysis of the vocal cord. Pain occasionally shot up to the left ear. With this history the physical signs indicated malignant disease of the thyroid gland of very typical character. On further investigation it was elicited that for about a year the patient had experienced considerable difficulty in swallowing. The laryngoscope revealed a granular condition of the posterior wall of the pharynx at the lowest visible point, such as would be presented by the upper margin of an epitheliomatous ulcer. A very small œsophageal bougie was tightly held, and it seemed clear that the case was originally one of carcinoma of the œsophagus, involving secondarily the thyroid gland.

Mr. F. MARSH agreed that the enlargement of the thyroid was due to carcinoma. He did not think it was secondary to the œsophageal growth, but that it had occurred independently of it. He had a few years ago a case under his care of carcinoma of the tongue and of the rectum in the same patient.

Mr. WYATT WINGRAVE showed *A Case of Aphonia with Paresis of Tensor Muscles.*

T. H., aged twenty-five, a seaman, complains of sudden loss of voice of four weeks' duration, and huskiness twelve months, with slight cough without expectoration.

There is neither dyspnœa nor dysphagia, and, excepting for his vocal defects, the patient expresses himself as in perfect health. His family and personal histories are good, giving no evidence of phthisis or syphilis. His appearance is somewhat anæmic, and he thinks that he has lost weight. He was a heavy smoker, but not a drinker.

On admission three weeks ago his larynx showed some slight periarytenoid swelling extending to the ventricular bands. Both cords were somewhat injected, and showed symmetrical thickening about the middle third. Abduction and adduction movements were lively, but tension was very feeble.

Chest examination elicited some harsh respiration over the larger bronchi, but no other definite physical sign. Heart dilated, irregular, and tumultuous. No sputum.

There was evidently some chronic laryngeal inflammation, probably tubercular, but insufficient to account for the very complete aphonia. After three weeks' treatment with creosote and potassium iodide he gained in weight. His appetite has improved, but, aphonia persisting, a mild interrupted current, with vocal drill, was tried, and quickly restored the voice, which is now strong, but deep in tone, and somewhat uncertain. It has not disappeared since the current was first applied four days ago with subsequent daily repetition.

Mr. BARK considered that there was sufficient inflammatory mischief in the larynx to account for the phonatory trouble, and was of opinion that probably we were dealing with a case of commencing tubercular laryngitis.

Dr. WHISTLER agreed with Mr. Bark. He thought, however, the conditions were not unlike those of syphilis, between the secondary and tertiary stages. The loss of weight—one stone—was a strong point in favour of tubercular disease.

Mr. LENNOX BROWNE felt constrained to express agreement with the opinions of the previous speakers. To take two points only: it had to be remembered that loss of voice of apparently purely functional character, and temporarily relieved by the Faradic current, was a not uncommon early sign of tubercular laryngitis; while, as to the loss of weight, although the patient had gained something during the time he had been under medical care, according to his statement his condition compared very unfavourably with that of a year previously.

Dr. MILLIGAN said that, as the result of his examination of Mr. Wingrave's case, he had come to the conclusion that the laryngeal lesion was of a tubercular nature. He would like to ask Mr. Wingrave if any examination for tubercle bacilli had been made.

Mr. WINGRAVE replied that he had been unable to obtain any sputum. He showed the case as one of aphonia mainly due to faulty tension of the cords, adduction being well performed.

#### Dr. TRESILIAN. *Throat Lesions in Enteric Fever.* —

This was a communication on eight consecutive cases within the last two months, four of which exhibited throat lesions.

I. A very severe case in a young man, aged nineteen. He had chronic enlargement of the tonsils, and had an attack of scarlet fever two months previous to the attack of enteric fever. The onset of the latter was fairly sudden, with marked delirium as an early feature. Temperature,  $104^{\circ}$  to  $106^{\circ}$  in the first week; diarrhoea, sixteen to twenty-three motions daily; and several sharp attacks of epistaxis. He also had three attacks of hæmorrhage from the bowel. The rash of typhoid was well marked, and he had a bad relapse.

At the end of the first week he complained of soreness of the throat and pain on swallowing, the voice became thick and husky, and the patient became deaf. On examining the throat the fauces and pharynx

were found covered with thick shiny mucus. A spray of boric acid and borax was ordered to be used frequently, and the next day the mucus had all cleared away. The condition of the throat was then as follows :— On the right tonsil and adjacent faucial pillar was a circular shallow ulcer, about the size of a threepenny piece, with a stippled appearance ; another similar ulcer occupied the base of the uvula, on anterior surface ; and a third on the anterior surface of the left tonsil. The tonsils and fauces were congested and swollen. The posterior wall of the pharynx was intensely inflamed and raw looking. An examination of the larynx could not be made owing to the patient's condition.

An examination of the ears showed slight pink colour and cloudy swelling of the membrane. The stippled appearance of the faucial ulcers somewhat resembled that of the lamina cribrosa of the optic nerve, as seen on direct examination. The throat lesions improved on continued use of the spray, and were practically well in about ten days, when the deafness also disappeared. The deafness was considered due to the throat lesions, a specific septic pharyngitis causing a similar condition of both Eustachian tubes and tympani, with swelling of the mucosa of the tympanic cavity, and an obstructive deafness resulting. When the patient's condition permitted it an examination of the larynx was made, with negative results.

2. A young lad of ten years of age, who had, previous to being first seen, complained of soreness of the throat, and had enlargement of the cervical glands beneath the angle of the lower jaw. The throat was normal when examined, but the glands were very enlarged. He subsequently went through a mild attack of enteric fever, with slight continued diarrhoea, the pyrexia lasting for three weeks. When last seen and convalescent the cervical glands were still somewhat enlarged. The glands must have been infected from a primary throat lesion.

3. A young woman, aged twenty-two, who had a sharp attack of enteric fever. She complained of soreness in the throat in the first week and became deaf. The condition of the throat after spraying was one of acute pharyngitis, and the membranes when examined showed a similar condition to that observed in the first case.

4. A young man of twenty-six years of age. In an early stage of the fever complained of soreness of the throat, which was found to be due to an acute pharyngitis. His ears were unaffected.

These cases showed that in enteric fever an inflammatory, and, in some cases, a specific, ulceration of the throat may occur in an early stage of enteric fever, and that at a period before the diagnosis of enteric fever can be easily arrived at—even within the first week. It also shows that in a case in which such specific lesions have occurred, contagion by the breath might occur to those in proximity with the patient. Reference was made to some similar cases recorded by Dr. Watson Williams in his book on "Diseases of the Respiratory Tract."

MR. LENNOX BROWNE, so far from agreeing with Dr. Tresilian that these cases had no particular inherent interest, expressed the opinion that they enforced a most useful lesson. The speaker had seen more than one case of typhoid with throat lesions which had been admitted to hospital

on an outside diagnosis of diphtheria; and if, as had been done, complications in throat and ear could be recorded in eight consecutive cases by one observer, it was reasonable to believe—as his own experience confirmed—that faucial lesions were much more common in typhoid fever than is usually taught, and the reason why it is not taught is that so few physicians of infectious hospitals take the trouble to make a routine examination of the throat and larynx, or of the ear.

Dr. ALFRED EDDOWES said that he did not know what was done in fever hospitals, but was glad to have observed lately that it was the practice at the Salop Infirmary to clean the teeth and cleanse the mouths of patients suffering from enteric fever. He remembered seeing, years ago, a woman neglected by her husband at a time when she was to all appearance recovering from the fever. She rapidly sank after the appearance of a purple rash on the skin and a black-crust ulceration of the tongue. He would now suggest that the latter lesion was of the nature of impetigo, the pus organisms having readily attacked the mucous membranes, which had been rendered less resistant by the starvation of the patient.

Dr. MILLIGAN said he had seen several cases where the internal ear had been affected.

Dr. TRESILIAN, in reply to a question by Dr. Hill, said that the throat lesion was not the initial lesion in the cases reported.

The PRESIDENT said that the terrible cases of laryngeal stenosis occasionally resulting from perichondritis from enteric fever, accentuated the necessity for care of the mouth and throat in this disease.

Dr. TRESILIAN made allusion to the remarks of Watson Williams in his book on the danger of contagion from the throats of enteric fever patients to nurses and attendants. He (Dr. Tresilian) thought there was great benefit in cleansing the mouth with alkaline lotion.

Dr. PEGLER communicated notes of and showed *Microscopical Sections from a Case of Post-Septal Lymphoma*.

The growths having been removed with the snare, scissors, and spoke-shave, the posterior third of the septum and its free border are seen to be about three times their normal thickness. Examined under the microscope, the growths, which were rough and distinctly pedunculated, are found to be made up of lymphoid tissue enclosed by a delicate ciliated epithelium without any very evident basement membrane. There are no lacunæ, but otherwise (except in the character of the epithelial covering) they closely resemble the faucial tonsils. In one of the sections, made in a vertical direction, there is much vascular tissue, including a number of lymph channels choked with small cells, similar to what one often meets with in an inflamed tonsil. Another more horizontal section is crowded with lymph follicles, each surrounded by a well-marked lymph path. Racemose glands, vascular sinuses, and œdematous connective tissue, so characteristic of moriform papilloid hyperplasias of the septum and turbinal bodies, are entirely absent, and to these latter they therefore bear no structural relationship. The paresis of the palate has been improved since the operations, but only partially, and speech is still defective.

Dr. HILL said he had a similar case brought to him as an adenoid case, and referred to the fact that Woakes had said many of the growths in the nose were lymphoid tissue.

Mr. WYATT WINGRAVE considered that the specimen was one of typical adenoid. Adenoids often extended from the vault of the pharynx as a crescentic ridge to the nasal septum, this being an exaggerated example of such a condition. Glandular and lymphoid tissue occur normally on the septum. He did not think the name "lymphoma" to be quite appropriate.

Dr. DUNDAS GRANT delivered the Presidential Address on "Some Lines of Progress in Laryngology, Rhinology, and Otology."<sup>1</sup>

Dr. MILLIGAN said that before proceeding with the work of the section he would like, as retiring President, to convey to Dr. Dundas Grant a warm vote of thanks for the admirable address to which they had had the pleasure of listening.

He felt sure that Dr. Dundas Grant's term of office would be a brilliant one, and he felt sure that every Fellow of the Association would cordially support him in his endeavours to make the meetings successful.

He begged to move: "That the best thanks of the meeting be given to the President for the excellent address which he has just delivered."

Dr. BARCLAY BARON seconded the proposal.

#### OTOLOGY.

The PRESIDENT showed *Four Cases of Mastoid Operation, showing varying Results.*

*Attic Disease treated by Radical Operation with Panse's Flaps. Illustrating the Result of Insufficient Plugging.*

Case 1.—A young lady, suffering from chronic otorrhœa and frequent headaches on the affected side, was found to have a cholesteatomatous formation in the attic of the left tympanum, and came under the joint care of Dr. William Hill and myself. We agreed in the first instance that the ossicles should be removed, and this was accordingly done, but with only slight temporary improvement, and it was accordingly decided to perform the radical operation, which I carried out along with my collaborator.

The opening was chiefly confined to the postero-superior wall of the meatus and outer wall of the attic as reached through the osseous meatus after the detachment of the auricle and cartilaginous meatus, the other surface of the mastoid being barely touched. Panse's flap—namely, a longitudinal tongue from the postero-superior part of the membrano-cartilaginous meatus—was turned backwards, and stitched to the inner surface of the junction of the two lips of the mastoid incisions. The latter was closed up completely, and plugging was practised through the external meatus. This was probably not carried out with the thoroughness with which we would now do it, but the recovery seemed to be in every way perfect and rapid, the cavity of the attic being freely exposed.

<sup>1</sup> Will appear in full in our next issue

From time to time the patient complained of headache, but when the speculum was introduced most careful inspection failed to reveal any collection of pus in the deeper parts of the tympanum or attic. At a later period it became evident that the site of the collection which gave rise to the headache was not in the deeper parts at all, but in the outer portion of the meatus which was completely covered up by the speculum. There was then found by means of a probe a recess within the cartilaginous meatus and in the outer part of its back wall, bounded in its outer and posterior part by Panse's flap, and limited towards the deeper parts of the meatus by the approximated cut edges of the membrano-cartilaginous meatus. On wiping out this little recess complete relief was obtained, and the patient herself is now able to clean it out by means of cotton wool, and keep it dried by the use of alcoholic drops. Had the pain not been thus relieved the posterior incision might have been reopened and kept from closing. On the other hand, if necessary, one might separate the attached edges of the cartilagino-membranous meatus above described; but at present the patient's condition, as far as her health and freedom from pain is concerned, is too satisfactory to justify any such interference. The result is, therefore, only relatively good, and the experience acquired in this case has led to the employment of greater energy in the use of pledgets of iodoform gauze to keep the deeper parts asunder during the after treatment.

*Radical Operation followed by Stenosis of the Meatus owing to Insufficient Plugging.*

Case 2.—A man, aged thirty-three, came under my care as the subject of chronic otorrhœa and suffering from severe headache and vertigo. On examination, the left meatus was found to be extremely narrowed, and at its deepest part filled up by granulations arising from the posterior wall of the meatus, which was carious.

The radical operation was carried out in the usual way, but at the urgent solicitation of the patient he was allowed to go home within a very few days after the operation, his symptoms having subsided to such a degree as seemed to justify this. The after treatment thus suffered extremely, with the result that there was such a degree of stenosis that only the point of the very finest probe could be passed through the opening. Ten days ago I introduced a doubled piece of pewter wire, which I left *in situ* for four days. I then found that the opening had undergone a slight amount of dilatation, and I introduced a strand of five wires. I hope immediately to be able to introduce a pewter tube as recommended by Mr. A. C. Miller, of Edinburgh, and thus obtain sufficient dilatation without any further cutting operation.

*Radical Operation followed by Suppuration under the Flaps. Insufficient Adhesion ultimately overcome by Plugging with Black Wash.*

Case 3.—A young lady (Miss R.), aged twenty-eight, came under the care, nearly two years ago, of Mr. StGeorge Reid and myself, on account of chronic otorrhœa with persistent headache. The discharge was from the attic, but the lower part of the membrane was almost entirely absent, exposing the promontory to such an extent as to make it simulate an

osseous tumour. The attic and the passage to the antrum were opened freely with but little disturbance of the outer surface of the mastoid process. Koerner's flaps were formed by means of a longitudinal incision from within outwards, along the postero-superior line of the membrano-cartilaginous meatus. The flaps were pressed back by means of iodoform gauze, and the post-auricular incision was allowed to heal with great rapidity.

For some reason or other the plugging failed to prevent the innermost extremities of these flaps from coming into contact, and the edges of the flaps gradually attached themselves to each other before they had acquired the proper degree of adhesion to the posterior wall of the cavity. Although the deeper parts seemed in so satisfactory a condition the patient soon complained of attacks of pain, and along the line of union of the flaps there was reddish bulging, such as an abscess would produce. On incision a little sero-pus exuded, and the patient obtained the greatest relief. An endeavour was made to keep this open and at the same time to encourage the healing of the cavity from the bottom, but without success. I then decided to reopen the mastoid incision and remove the bone with greater freedom. I did this, but without detaching the flaps at the deepest part for fear of injuring the facial nerve. Healing again took place with great rapidity, but the collection of sero-pus formed as before, and the patient was again subject to attacks of pain. Before I went on my holiday I started plugging the little cavity with gauze dipped in black wash, and during my absence Dr. Thorne carried out this method of treatment with great thoroughness and regularity, with such excellent results that on my return I found the skin flaps firmly adherent to the bone, and the cavity apparently obliterated. This case shows the importance of devoting one's attention to preventing the approximation of the flaps in their deepest part, allowing the outer part to look after itself.

I should attach much more importance to this part of the after treatment than to the maintenance of a post-auricular opening, to which so much energy is often devoted.

*Schwartz's Operation for Cholesteatoma, with Relief for Five Years. Recurrence and Subsequent Radical Operation.*

Case 4.—A detective-sergeant, aged forty-one, suffering from chronic suppuration of the right ear since childhood, came under my treatment five years ago, on the recommendation of Dr. Gordon Brown, on account of intense pain, cerebral disturbance, and unbearable vertigo. There were granulations on the posterior wall of the meatus, and a curved probe passed into a cavity from which fœtid pus exuded. A curved canula was introduced into the opening, and a little more of the contents were washed out, but the proceeding caused intensification of the symptoms. The operation on the mastoid according to Schwartz's original method was then carried out, and a large cholesteatoma was removed. The patient was at once relieved, and the posterior opening was retained for several months. During the course of after treatment a small sequestrum, consisting of a portion of a semicircular canal, was extruded. The patient remained under observation at long intervals, and had no recurrence of

symptoms until May of this year, when he returned complaining of pain in the right side of the head, vertigo, and feverishness. It was then decided to reopen the mastoid according to the modern modification of Schwartze's process. The antrum, attic, tympanum, and external meatus were converted, as far as possible, into one opening, and very rapid recovery took place.

The patency of the communication between the parts named is now very obvious.

Dr. MILLIGAN said that he had examined the case of mastoid operation with great interest, and he would like to ask the President what his experience was with regard to the length of time taken for complete healing.

He himself had had some considerable trouble in securing a complete cuticularization of the entire operation field, especially towards the apex of the triangle left within the mastoid process, and considered that a great deal of the success in the treatment resulted from careful packing of the wound per meatum.

His practice was to put in sutures at the time of operation, but not to tie those sutures until the time of the first dressing.

With regard to the case of stenosis, he would be inclined to open up the wound from behind, and practically to repeat the operation, as he thought that behind the stenosed area granulation tissue and diseased bone were present.

Mr. F. MARSH asked which of the recent mastoid operations had, in the President's experience, given the most satisfactory results.

The PRESIDENT read the notes of *A Case of Complete Bilateral Deafness, the Result of Mumps*. (Communicated by Dr. LAMBERT LACK.)

*Previous history.*—Ten years ago the patient, a girl now aged fifteen, had scarlet fever and a discharge from the ears, which lasted two to three weeks. She completely recovered from this and has had no subsequent ear trouble.

*Present illness.*—January 6th, 1896. Six weeks ago said to have taken cold and had mumps, which lasted about two weeks. During the illness the child was noticed to be slightly deaf. When getting better she had an attack of severe vomiting lasting three days. When this ceased she was noticed to be much more deaf. She complained of a funny feeling in the ears, seemed silly, almost dazed, and staggered a good deal on trying to stand or walk. She was now noticed to be much more deaf, and in a few days, although quite recovered in other respects, was found to be completely deaf. On examination there was found to be almost complete loss of hearing, both for air and bone conduction. It was doubtful if she could perceive very loud sounds in the right ear. Twenty-one months later she remains the same.

Mr. WYATT WINGRAVE. *Tuberculous Disease of the Middle Ear complicated by Optic Neuritis*.

Miss A. S., aged twenty-five, a somewhat hectic blonde, was sent to me by Dr. Boys, of St. Alban's, in June, 1896, complaining of painless

discharge (with deafness) from both ears since infancy. Granulations were present in each ear, but no caries could be felt. The hearing was—

R. — 6      L. — 10  
+ 4            + 5

Her family history was strongly tubercular, and she suffered with inflammation of the brain with swollen tongue when eight years old. The granulations were reduced by the aid of curettage and pure phenol, her hearing and general health greatly improving.

On August 30th last she noticed dimness of vision in the right eye, which rapidly increased, and in three days she became totally blind in that eye. This was attended by intense supraorbital pain, nausea, occasional vomiting, vertigo, and shivering. Otherwise her health appeared normal. The deafness was slightly worse and discharge from right ear ceased.

On September 4th she saw Mr. Treacher Collins, who diagnosed optic neuritis. Leeches, rest, and iodide of potassium were ordered at once. Pain, nausea, and vertigo ceased in three days. The iodide was continued and symptoms carefully watched.

On September 6th discharge reappeared in right ear, general condition continuing very satisfactory. The temperature was never above normal.

On October 16th she was able to read large type, but her vision has not made any further appreciable improvement.

The chief interest of the case is its pathological interpretation. Is the optic neuritis set up by meningitis secondary to the ear mischief, or is it due to intracranial tubercular growth? The entire absence of constitutional and temperature disturbance is somewhat against the view of meningitis, and her age against tubercular growth. Mr. Collins informs me that most cases which he has met with of this complication occurred in children.

Dr. MILLIGAN would like to ask Mr. Wingrave upon what grounds he concluded that the case which he had just shown was one of tuberculous disease of the middle ear. He would like to know if Mr. Wingrave had examined the pus or granulation tissue for tubercle bacilli, or if he had performed any inoculation experiments. He himself had had considerable experience of cases of tuberculous disease of the middle ear, and had come to the conclusion that bacilli were extremely difficult to find in pus from the ear, although at times they might be found within the substance of small granulation tissue tufts.

Mr. WYATT WINGRAVE, in replying, said that he had examined the discharge four times for bacilli by the Ziehl-Ueelsen method unsuccessfully, but found them at last by staining the granulation tissue after Gram's method. He felt that Dr. Milligan's suggestion was of great value.

Dr. TRESILIAN showed a man who had suffered from *Chronic Suppurative Otitis of Thirty-Six Years' Duration, due to Scarlet Fever in Childhood*.

When first seen he had intensely foetid discharge, hæmorrhage, and pain in both ears. This was found to be due to multiple polypi and cholesteatomata on both sides.

The polypi were removed and recurred rapidly, and had to be removed again. Alcohol and glycerine drops were used and all syringing prohibited. The cholesteatomatous masses were removed gradually with forceps, and ceased to be re-formed under the alcohol treatment, and the polypi ceased to recur.

The case showed two interesting points :—

1. The length of time in which such a serious condition continued without giving rise to cerebral or even mastoid trouble.
2. The use of alcohol and glycerine in treatment of both cholesteatomata and polypi.

The patient has had no discharge now for nearly a year. There was a large, almost complete, perforation on each side. The hearing power had improved immensely, all pain had disappeared, and all source of danger to the patient may be considered to have been removed in a condition that frequently requires mastoid operation. Artificial membranes had been tried, but were of no use in the case.

## TWELFTH INTERNATIONAL MEDICAL CONGRESS, MOSCOW.

*Third Day's Proceedings.—22nd August, 1897.*

*(Continued from page 616.)*

Prof. COZZOLINO *in the Chair.*

### DISCUSSION ON THE LOSS OF VOICE IN SINGERS.

Prof. H. KRAUSE (Berlin). *On the Etiology and Treatment of Loss of Voice in Singers.*

The speaker expressed his surprise that the leading works on the physiology of the voice had not been followed by any work of importance on the pathology of the same. The mechanism of phonation is very complicated, including (1) the so-called musical ear, (2) the respiratory apparatus, (3) the larynx, and (4) resonance tube and chambers. The resonance chambers have their own fundamental tones, by which the sounds produced in the larynx are strengthened. Amongst *general causes* of disturbance of voice an important place is given to chlorosis, which principally affects women. *Special causes* may arise from (1) disease of the larynx, inclusive of its innervation ; (2) from those of the trachea, of the bronchi, and of the lungs ; (3) of the pharynx and its adnexa ; (4) of the nose and its adnexa. Most diseases of the organ of voice arise from improper forcing and overstrain. The speaker condemned the modern methods of instruction in singing, and demanded properly trained teachers in all high schools. He discussed the disadvantages of women's clothing, especially their corsets. Among diseases of the larynx he described an increased injection of the vessels, hyperæmia of the laryngeal mucous membrane, chronic catarrh, often due to smoking and abuse of alcohol. The evil effects of alcohol on the tissues, viz., early ossification

of the cartilages, also its effects on the mental powers, were pictured. Next he dealt with hæmorrhages in and under the mucous membrane and the treatment thereof; then took up pachydermia, its position and treatment. Muscular paresis often accompanies the foregoing disease, and should be treated with endolaryngeal faradization. The question of the function of the thyro-arytenoid muscles and the effects of paresis were fully discussed; then the treatment of paresis by muscular exercise was mentioned. Singers' nodes, whose position and size were described, always destroy the elastic tissue of the vocal cord in their immediate neighbourhood. Treatment in most cases must be surgical, but is difficult. Paralysis of the vocal cords in tubes and its effect on the voice were then touched on. Pathological changes in the resonance tube may have grave effects on the voice: they increase the work of the larynx and lead to overstrain; they destroy the harmonious beauty of the tone by cramping the space and by interfering with the co-ordinate working of the larynx with the resonators. Diseases of the nasal accessory cavities and nasal reflex neuroses are also at times causes of loss of voice.

Dr. CUBE related the case of a singer who caught a bad cold, followed by hoarseness and loss of voice. After a short time the voice was recovered, except for one tone. The patient seemed to have completely lost the muscle sense for that one tone. Some months of training, treatment, and exercise were required before this note could be produced.

Dr. P. HELLAT (St. Petersburg). *On the Respiratory Mechanism in Singing.*

Depending upon the importance which is always given to breathing by singers and teachers of singing, and from the practical experience that all good singers prefer the abdominal type of breathing, the didactic literature of a short review is submitted.

The author comes to the conclusion that the descriptions in the textbooks for singers are too defective to give the pupil an idea of what he has to understand by the abdominal type or how he can acquire it. The author finds also in medical literature defects which concern the breathing mechanism in singing. The rôle of the diaphragm is not definitely defined. Both Nardle's theory of the antagonism of individual muscles and Merkl's theory of the regular action of the diaphragm find their supporters. Thus the question of respiration is at present confused. The author rejects both views, and vindicates his preference for the abdominal type for the following reasons:—

In respiration the diaphragm takes part, and in expiration the abdominal muscles. To this the definition of abdominal breathing is applied. The resonating quality of the lungs is appreciably better than in other types. Further, the abdominal muscles possess a great power of accommodation to voluntary impulse. Finally, the pressure on the lungs and on the volume of air takes place not through rigid walls, as in costal breathing, but through elastic intermediate space containing air consisting of stomach and intestines.

Dr. BARTH. It had already been pointed out by previous speakers that one of the most frequent causes of loss of voice, especially in young

women, was chlorosis. Dr. Barth thought there was another side to the question. While admitting chlorosis as a frequent cause of the loss of voice, he could not recommend that the singing be stopped on that account, but would rather advise every chlorotic patient to practise singing regularly as one of the very best methods of systematically exercising the lungs, and thereby aerating the blood—in other words, one of the best methods of treating chlorosis. It had been remarked that singing teachers ought to be taught more of the physiology of the larynx and of voice production. In the meantime he considered that was an absurd demand, because scarcely any point in the physiology of voice production was yet established. Every teacher ought to know enough to recognize a voice when he heard it; not to strain it; above all, not to hurry too much. Far more time ought to be given to the development of a voice than was at present customary. Eight or nine years was a reasonable time for this. Dr. Hellat had insisted on the necessity of nasal respiration in singing. Dr. Barth agreed that that was the physiological ideal and should be carried out as much as possible, but it was not always possible—*e.g.*, when a deep breath had to be drawn rapidly for the production of a long note, respiration had to be oral. One point he considered of great importance—that was that the larynx ought to remain fixed, not jumping up and down in the neck, as that was sure to injure the crico-arytenoid articulations, and probably also the crico-thyroid.

Dr. GLEITSMANN discussed the practical question of how to deal with a singer whose larynx demanded rest, but whose circumstances did not permit it. He described one such case in which much benefit had been derived from the use of trichloracetic acid for a short time, followed by the prolonged use of benzoinal, camphor, and menthol. Thereby the singer had been able to carry on her profession during a whole winter session, though her larynx was in bad condition. If nodes are found on the cords they must be surgically removed. No special difficulty—though, of course, extra care is always demanded in dealing with the larynx of a singer. Lastly, he described a method of investigating the influence of the resonance chambers by means of sand on a vibrating plate.

Dr. CATTI had often noted on the vocal cords of singers little lumps like collections of mucus, but which on examination were found to consist largely of epithelium. These were often so minute that it seemed scarcely credible that they should be the cause of so much voice disturbance. On the other hand, it was perfectly well known that a voice might be in perfect order while the larynx was in a condition far from what we consider physiological.

Dr. KRAUSE replied. The case described by Dr. V. Cube was doubtless one of phonasthenia. It was not a very unfrequent condition, but always occurred in old or otherwise worn-out larynges. He agreed that singing teachers ought to be better taught; they should be taught by the State, just as any other teacher is. He further agreed that singing was one of the best methods of treating chlorosis. He could not agree with Dr. Barth that the larynx should stand still in singing; that was an impossibility. Of course it ought not to make sudden and violent up-and-down movements. In regard to Dr. Catti's remarks about fine

singers with apparently pathological larynges, he knew one eminent tenor whose vocal cords were like two small red sausages, but who, nevertheless, could undertake the most trying tenor parts.

Dr. HERYNG (Warsaw) apologised for speaking at all, as he had not been able to prepare a paper, and then proceeded to describe the operative treatment of vocal cords in which a pachydermatous condition has been produced by repeated or chronic catarrhs. He first remarked that it was not the beautiful pearly-white cords that produced the finest voices ; indeed, owners of such vocal cords had very frequently to come to the laryngologist complaining of vocal troubles. In such cases it was frequently possible, by using a Huischberg's prism, to find that the pearly whiteness was produced by numerous layers of thickened epithelium. On the other hand, some of the best singers had distinctly red catarrhal-looking vocal cords, *e.g.*, Jean de Reszke's vocal cords were slightly red before and very red after singing. From these and other similar facts in his experience the speaker drew the conclusion that we should never be in a hurry to treat a singer's larynx in any radical way.

He warned specially all the younger laryngologists to be extremely careful in their dealings with singers ; he did not know any sort of people to equal them in thanklessness. Proceeding then to his theme proper, he said it was easy to understand how pachydermia should be frequent among singers. In the first place, they were exposed by the nature of their calling to frequent catarrhs. Secondly, they were unable to give their catarrhs proper treatment, but must sing, whether they were fit or not. Thirdly, smoking, over-eating, and over-drinking were the worst things possible for voices ; but nearly every singer smoked too much, eat too much, and drank too much. By these means a slight catarrh easily became chronic and proceeded to produce pachydermia. Dr. Heryng then described a case of pachydermia circumscripta of the vocal cords and his methods of treating the same surgically. On examining the larynx, he found several milky-white spots on the upper surface and free edges of the cords. These were distinctly raised above the surface and projected well beyond the margin. In such a case it was evident that sprays, inhalations, etc., would do no good, and that caustics, by further irritating an already irritated larynx, would simply make matters worse. He, therefore, determined to operate. The larynx was first thoroughly cocaineized. This, of course, had to be done ; but, in one sense, it made operation much more difficult—because cocaine not only anæsthetizes, but also paralyzes the vocal cords. Then, with a pair of forceps, the thickened epithelial masses projecting from the edge of the cord were seized and snipped right off. In dealing with the thickened part on the upper surface of the cords, each individual piece had to be snipped away. The cord must be left absolutely smooth, no little projections being left. On the other hand, the operation, to be of value, must not cut or tear away any pieces out of the elastic tissue of the cord proper. After the operation he thoroughly cauterized with nitrate of silver. To the objection that thereby he ran the risk of producing aphonia, Dr. Heryng replied that that was precisely what he wished to produce. Had the patient been able to speak at all, it was an absolute certainty that he would have

talked and have given the larynx no rest—consequently, no chance of recovering. Absolute aphonia was the only thing that would keep people quiet. He strongly warned, however, against the use of either chromic acid or galvano-cautery. Dr. Heryng next described two cases of gout in the larynx. Gout in the larynx was known already, but generally occurred in the joints. He, however, had seen two cases in which there was little doubt that the vocal cords themselves were affected. In one there were two little white streaks in the vocal cords, which examination (including transillumination) and treatment convinced him were gouty deposits. Of course, it was impossible to prove the fact absolutely; but he himself entertained little doubt on the point.

Dr. BOTEY (Barcelona). The most dangerous thing for the voice was the *voix parlée*. Vocal nodes were comparatively rare in singers who did not speak, *i.e.*, contrasted with their frequency among orators, preachers, etc. One point ought to be more impressed on young would-be singers or public speakers, *viz.*, that the voice of a great singer or speaker must be to that of an ordinary mortal as the arm of a Hercules to the ordinary arm. It is because this is so little considered that so many young singers and orators break down completely after only a year or two of work. A very slight change in the larynx of a singer may be of vital importance to him, whereas to an ordinary individual it would probably pass unnoticed. Next to the speaker the soprano or tenor singers are most liable to vocal nodes. They can be cured by caustics, by cutting forceps, or by rest. In many cases of hoarseness of the singing voice, of loss of the *voix fille*, etc., nothing can be seen wrong with the larynx. In such a case the patient should be made to sing till he is tired, then it will frequently be found that one cord is slightly more convex than the other, or else that a very short piece of one cord rests on and so damps the vibration of the other.

Prof. COZZOLINO spoke of the effect on the ear of the intelligence, of the spirits, etc., *i.e.*, of the effect of psychological condition on the voice.

Dr. GOTTSTEIN demonstrated stereoscopic views of pharynx, etc.

## AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY.

*Third Annual Meeting, held at Washington, D.C., May 1st, 2nd, and 3rd, 1897.*

*(Specially reported for this Journal by ROBERT C. MYLES, M.D., New York.)*

*The President, FRANK HYATT, M.D. (Washington), in the Chair.*

*First Day—May 1st.*

### *New Curettes.*

Dr. LEWIS A. COFFIN (New York) presented two curettes, with one of which he said he could do all the work that could be done with the larger instruments in the naso-pharynx. He found it useful in removing the fragments after a forceps operation for removal of adenoid growths. It is useful

in clearing out the various fossæ about the naso-pharynx. In chronic catarrhal naso-pharyngitis he had used it for curetting over the diseased membrane, previous to using one of Mandell's solutions or some modification of the same. This instrument, on account of its size, can be used with either the mirror or finger acting as guide.

The other curette was for use in the oro-pharynx, and owing to its bent shank could be used over a large extent of the posterior wall of the pharynx.

#### *A New Cauterizing Instrument.*

Dr. COFFIN said that he had met with excessive secondary hæmorrhage in a case in which he had used the galvano-cautery for the reduction of posterior hypertrophy of the inferior turbinated. The boy was not a "bleeder," as he had previously removed adenoids and done a tonsillotomy on the case. The hæmorrhage had been checked at first by tamponning, but it had recurred nearly a week later with great severity. After much trouble it had been controlled, but after a week or ten days had again recurred, and the boy had been left almost exsanguinated. He had a second case nearly as bad, and owing to these unpleasant experiences he had been led to devise the instrument presented.

It is essentially a hypodermic needle, having a long canula between the barrel and needle so curved as to most easily reach the posterior end of the inferior turbinated through the pharynx. It is also useful in reducing those thickenings so often seen posteriorly on the septum. Dr. Coffin said that in using the instrument a palate retractor and mirror should be used. He had used the instrument with most gratifying results on one man who was a pronounced "bleeder." He injects one or two drops of monochloracetic acid into the part to be removed.

Dr. LEWIS C. CLINE (Indianapolis) asked what was the advantage of this last instrument over the cautery needle. He had observed some annoying hæmorrhages follow the use of other liquid caustic applications.

Dr. COFFIN replied that after the use of the monochloracetic acid there was left a peculiar non-suppurating slough, which did not come away until cicatrization had taken place underneath. He had not observed that the acid injured the instrument if ordinary care was used.

Dr. WILLIAM SCHEPPEGRELL (New Orleans) said that the curette intended for removing adenoids seemed to be a very efficient instrument. Personally, he used an instrument arranged something like the Gottstein curette, except that it is heart-shaped, and the depression fits into the septum. Such an instrument, fitting as it did on both sides of the septum, allowed the work to be done very rapidly.

Dr. WENDELL C. PHILLIPS (New York) said that he had examined many of these modified heart-shaped Gottstein curettes, but had yet to see one that did not do most of the cutting just at the tip. If it were used several times from above downwards] it would make only several narrow "ditches," and really do much damage to the membrane. Unless, therefore, the instrument was made so as to prevent this cutting at the tip, it should be condemned. He always advised against their use. Dr. Coffin's instrument seemed to him to possess elements of value, par-

ticularly when used with the mirror, so that small remnants could be removed.

Dr. J. E. NICHOLS (New York) said that the instrument just presented was exceedingly useful in cases in which there was a prolongation of the adenoid posteriorly into the nostril.

Dr. SCHEPPEGRELL said that he was accustomed to use first the Gottstein instrument, and then the modified instrument, when required, in order to quickly and thoroughly remove the last pieces.

Dr. JOHN A. THOMPSON (Cincinnati) said that the ordinary sharp uterine curette could be made to serve an excellent purpose, the copper stem being quickly twisted into the proper shape for work upon the adenoids. It was exceedingly valuable because of its pliability and adaptability to any case.

Dr. H. HOLBROOK CURTIS (New York) said that he always completed his adenoid operations by introducing a large snare loop through the inferior meatus, bringing the canula up as far as possible before snaring on both sides. He had been surprised at the size of the mass of detritus drawn out in this way from the upper corners of the pharynx, and his results had been much better since adopting this plan.

Dr. ROBERT C. MYLES (New York) said that his objection to the heart-shaped curette was that on several occasions he had known the child to twist the head to one side and cause the sharp process of the instrument to dig into the upper wall of the Eustachian tube. It was almost impossible to keep the curette in the middle line of a child's head. In his work a small pair of post-nasal forceps, with large fenestra, had served him well in removing growths under ether.

Dr. SCHEPPEGRELL stated that he avoids the cutting forceps whenever possible, as most of the operations which he had seen followed by complications had been done with the forceps. He believes this to be due to the fact that there is always considerable tearing when these instruments are used, which thus leaves openings for the entrance of pathogenic germs.

Dr. WILLIAM H. DALY (Pittsburg) said that the instruments just presented were very satisfactory, but would probably be still more convenient if made with lighter handles. In removing adenoids with forceps it would be found desirable in the case of sessile adenoids not to attempt to tear these away, but simply to crush them. They would be absorbed within three or four weeks and leave the mucous membrane in a healthy condition.

Dr. C. A. THIGPEN (Montgomery, Ala.) said that in his early operations for adenoids he had used the heart-shaped curette, and had caused damage along the posterior pharyngeal wall. He looked upon this as a dangerous instrument. He rarely ever uses the forceps now, as he is successful with the Gottstein, and a smaller instrument devised by himself after the Gottstein, which can be easily introduced into the choanae for the remaining lateral masses of adenoids which may be there.

#### *X Rays in Rhinological Work.*

Dr. SCHEPPEGRELL also exhibited some X-ray photographs of the cavities of the head and throat. He stated that his object in investi-

gating the X rays in connection with the nose and throat was not simply to find out what could be done with this method, but what results could be had which could not be obtained or not as well done as by the ordinary methods.

In the œsophagus the X rays have been useful in locating foreign bodies, but in the larynx this may be done so well by the laryngoscopic mirror that it would be a waste of time to try the X rays in such cases. Only in instances where the laryngoscopic mirror failed would this be useful, as in a case recently reported, in which a small pebble remained in the ventricle of the larynx for several weeks, which could not be seen by means of the laryngeal mirror. This foreign body might have been detected by the fluoroscope or X-ray photograph.

In the nose the case is the same as with the larynx, as the ordinary methods are usually sufficient. In the accessory cavities, however, where our ordinary methods are not adequate, this would be a useful field. Dr. Scheppegrell has taken a number of photographs of the accessory sinuses, with a view of defining the usefulness of this method. In the photographs presented, the frontal sinus was distinct and the maxillary sinuses were well marked. The nose and larynx were so transparent to the rays that they were barely outlined, but the hyoid bone was distinct. A foreign body, opaque to the rays, such as a metallic object, stone, etc., would be clearly shown in these cases. It must be admitted, however, that in the accessory sinuses the results have not been satisfactory. In the majority of cases a disease in these cavities is limited to the soft tissues, and as these are relatively transparent to the rays, while the bony covering is relatively opaque, it is evident that the results will be insufficient. It is to be hoped, however, that further investigations may throw more light on this subject.

Dr. F. C. COBB (Boston) presented an *Electric Saw*.

The advantages claimed for this saw are its strength, convenience in handling, and simplicity of construction, and the ability to start and stop it instantly by means of a friction clutch attached to the handle. In shape it does not differ materially from several of the saws already in use. Its weight and strength permit but little vibration.

The friction clutch is so arranged that the lifting of the little finger at once arrests the motion of the saw. The teeth are arranged thirty to the inch, without set, the back of the saw being thinner than the cutting edge, to prevent binding.

A battery of from six to eight volts is necessary to drive the saw. The instrument consists of a saw blade and hand piece operated by a cable attached to an electric motor or other power apparatus, the power being transmitted to the saw blade by an eccentric motion enclosed in the case of the hand piece. An eight-horse motor surgical or dental engine is suitable to transmit power to the hand piece. The saw is at a higher plane than the transforming mechanism, so that it enables the operator to see more fully the work that is being done by the saw within the nasal cavity.

Another advantage is that the arrangement by which the saw blades

are held in position enables the saw to be used, not only upwards and downwards, as in the mechanical saws already described, but also at any required angle.

Lastly, the movement of the saw may be instantly started or stopped, or increased or decreased, by the movement of a sliding thumb-piece in the handle, without arresting or changing the movement of the motor. The same instrument may be effectively used for massage of the upper respiratory tract. This instrument is made by Messrs. Geo. Tiemann & Co., New York.

#### *Headaches from Nasal Causes.*

Dr. SARGENT F. SNOW (Syracuse) said that in 1894 he had published in the "New York Medical Journal" a paper on this subject, and at that time the literature had been quite meagre. Dr. Harrison Allen had published perhaps the first authentic paper on the relation of headaches to intranasal conditions. The speaker said that he had selected from his records thirty cases of headache that had been referred to him, and which had proved to be due to nasal causes. Sixteen of these were treated between 1891 and 1894, giving three to five years in which to judge of the results; ten of them showed from ninety to one hundred per cent. relief of their headache. The youngest patient was seventeen, and the oldest sixty-five years of age. A large number were females; sixty per cent. were over forty years of age. Of the sixteen who received a full operative course, twelve reported from ninety to one hundred per cent. improvement from the treatment. Operative work gave the quickest and best results. A little more of the offending overgrowth should be taken away than was necessary to relieve the pressure, because of the tendency to frequent congestions, but not enough to impair the natural functions of the nose. The theory of headaches being due to stasis was supported by several eminent authorities, and should be given due weight. He was of the opinion that the recurrent attacks were due to the irritability of the nasal membrane and recurring pressure on sensitive points. The relapses might be due to stasis. If stimulating applications were given once or twice a week, these patients remained comfortable. The best method was to spray the parts with iodole and ether (three grains to the ounce). There was a certain number of cases that could be successfully treated by relief of pressure contacts alone. About seventy or eighty per cent. of cases of hemicrania were due to removable causes located in the nasal passages. In some, on examination, a bluish red or relaxed appearance of the membrane would be all there was to indicate that at times there were points of pressure. These cases did not require operative interference, but certain changes in the habits of life and occasional stimulating applications. Many cases of acute headache could be given at least temporary relief by cleansing out the nostrils and using a spray of iodole and ether, preceded by a light cocaine spray to dull the smarting.

Dr. PHILLIPS asked if Dr. Snow had taken pains to find out if there were any definite symptoms which were characteristic of intranasal pressure.

Dr. H. HOLBROOK CURTIS said that he would be loth to have the

statement go forth from this Society that for chronic stenosis of the nose cocaine spray should be employed. In 1889 he had read a paper in the New York Academy of Medicine, comprising seventy cases, showing the disadvantages of cocaine even when used in very dilute sprays in the nose. He would also protest emphatically against the use of menthol in the nose, for anything which would in this way reduce the turgescence would bring about a vaso-motor paresis which would eventually make the condition much worse than at the beginning. It was becoming very common for people to use these sprays and applications, and they were leading to bad results and were exceedingly unscientific.

Dr. CLINE said he would endorse what had been said by the last speaker. He protested against the use of cocaine by the patients themselves. He could recall from his own observation three or four cases in which the cocaine habit had been established in this way. Among these patients were two physicians, one of whom was already in an insane asylum.

Dr. ROOT said he desired to add his testimony regarding the use of cocaine. He was reminded of a man who had consulted him a year or two ago for exostosis of the nose, but who had failed to keep his appointment to have it removed. On his return, the man was found to be addicted to cocaine. Dr. Root said that he never allowed a patient to use cocaine himself, and personally never used it in the fauces, believing it to be dangerous and valueless. He thought that the rhinologists sometimes went a little too far in their enthusiasm. If a case presented a marked exostosis, or a hypertrophied turbinate, causing marked nasal obstruction, it should be operated upon; in other words, the main point was to operate so as to secure nasal breathing. However, it should be borne in mind that in doing this we should not destroy tissues put there by nature to perform a certain function. The nose was very tolerant of interference, yet it had been terribly abused in this respect.

Dr. LOGAN said that he desired to commend the paper just presented to the Society. Personally, he had been a great sufferer from headaches, and had not been relieved by oculists and others. Finally, on relieving the stenosis of the upper nasal cavities the headaches had disappeared. This had been his experience in other cases. Whenever there was pressure of the middle turbinate on the septum, or improper drainage from the upper part of the nose, he had usually found headaches present. In his opinion, these headaches were due to improper drainage from the upper cavities and accessory sinuses.

Dr. JOSEPH A. WHITE (Richmond, Va.) said that, whilst the indiscriminate and improper use of cocaine was to be deprecated, he thought its bad effects were sometimes exaggerated, and that no other remedy was as valuable for local anæsthesia in nasal and throat work, especially in removing adenoids and tonsils. He knew the statement was sometimes made that cocaine was of no use in the removal of tonsils, and in order to satisfy himself on this point he removed one tonsil from an adult with cocaine, and the other without cocaine. The former was painless, and the latter was decidedly painful. Again, the removal of the adenoids, in his experience, was made almost painless by the use

of cocaine. In his article entitled "Nasal Reflex Neuroses," published in Burnett's "System of Diseases of the Ear, Nose, and Throat," he had given the entire literature of the subject of headaches of nasal origin. Headaches, he said, might result from any form of continuous contact in the nose, but chiefly from pressure of the middle turbinate upon the septum. He had known nasal headaches to occur in cases in which there was apparently no nasal obstruction whatever, although stenosis and pressure existed above the middle passage. Neuralgias of the first and second branches of the fifth nerve were particularly common from nasal conditions. He was satisfied that any contact in the upper portion of the nose was likely to result in headache, whether or not they were sufficient to materially interfere with breathing and drainage. This condition was often overlooked, although frequently the cause of facial neuralgias and severe headaches.

Dr. W. H. DALY (Pittsburg) said that the fact should not be lost sight of that carbolic acid is a most valuable local anæsthetic. In operations such as the removal of the tonsils, the fauces would tolerate a solution of twenty grains of the crystals in one ounce of glycerine. Two or three applications and a period of twenty minutes would place the parts in such a condition as to tolerate the operation with but little discomfort. A solution of two to five grains to the ounce would answer for operations within the nose. We had, as a profession, been led astray by the use of cocaine—indeed, he was inclined to think that cocaine had proved to be altogether more a curse than a blessing. He had never used cocaine to any great extent, for he had long appreciated the valuable anæsthetic and antiseptic properties of carbolic acid, as well as the reactionary evils of cocaine.

Dr. MYLES said that the paper under discussion had brought out some very salient points with regard to headache, yet he thought most of those present would agree with him that nearly all middle turbinates were in contact with the septum; hence, this did not constitute any reason for operative interference. He had long ago noticed that the continuous application of cocaine for a number of hours produced a peculiar vaso-motor paralysis, and that the turbinates became passively congested. From one or two applications of cocaine at intervals of a few days he had never seen any bad results. During the first few hours of an acute rhinitis cocaine acted admirably if applied only by the physician. He never allowed the patient to use it, except during a few hours after the application of acid. He had been looking for ten years for a case of pure and simple cocaine habit—in other words, for a person who did not use either morphine or whiskey also.

Dr. SNOW, in closing the discussion, said that he had intended to convey in his paper the idea that cocaine should be used only preliminary to the iodole and ether spray to prevent smarting, and he would never be guilty of prescribing a cocaine spray for the patient. The good result following the iodole and ether spray was much more lasting than from cocaine. Nasal headaches were usually neuralgic or hemicranial in their character. We should not be satisfied with simply securing good nasal respiration, but should secure a free normal passage through the

upper portions as well as the lower. It was true that in many cases the middle turbinate pressed against the septum without causing headaches, yet if such a condition existed in a neurotic subject we are very liable to get reflex disturbances, as hemicrania, asthma, or epileptic seizures. Pressure at this point with a cotton-wrapped probe or gauze dressing is often sufficient to cause intense suffering.

*Surgery of the Inferior and Middle Turbinate Bodies and Bones.*

Dr. R. C. MYLES said that operative interference was indicated in cases of hypertrophy, congestion, and polypoid changes in the middle turbinate, where the turbinates obstructed operations upon the accessory sinuses, etc. It was his custom to render the nasal vestibule aseptic before operating upon the turbinates, carefully cleansing the parts with alcohol, and afterwards with a one in a thousand solution of bichloride of mercury. He used ordinary piano wire, Nos. 3 and 5, in the snare, for removal of the inferior tip. He firmly believed that, in some cases, the removal of the inferior body was absolutely demanded. After thorough cocainization he made slight section through the bone, anteriorly, with a saw. He next inserted a Knight's scissors, and made a section between the periphery and the attachment of the bone. Bosworth's snare was next introduced over the posterior part of the bone. The operation should never be performed when the septum was straight, the vestibule large, and the fossa roomy. In certain cases in which the turbinates were hard and extended downward, and especially in gouty and rheumatic subjects, turbinotomy had given almost magical relief, and had been attended in his hands by no bad consequences. Bosworth's snare had proved to be the most useful instrument that he possessed for operating upon these cases. Submucous injections of acids, and the electro-cautery, were occasionally useful. He had had several cases of serious hæmorrhage after the removal of the inferior turbinate, although never after the middle turbinate. The hæmorrhages occurred from a few hours to a week after the operation. It was easily stopped by inserting a tampon of cotton saturated with tannic acid and gallic acid.

Dr. CLINE said that this Society should take a stand against the present fashion of turning out throat and nose specialists after a few weeks of instruction in some medical centre. He cited a case in which, after an operation by one of these amateurs, secondary hæmorrhage occurred and nearly cost the patient his life.

Dr. MYLES said that he preferred Knight's scissors, and the operation should not occupy more than half a minute. He thought it perfectly safe to operate in this speedy manner.

Dr. HUBBARD said that he had operated many times upon the inferior turbinate in the manner described by Dr. Myles, but packed the separated part against the bone by the use of an astringent tampon. This caused an adhesion, and the hyperæmia of the separated part would be found entirely relieved in a number of days. He had found this an excellent method of relieving stenosis in a number of cases instead of removing the part completely.

Dr. SNOW said that in the middle turbinate bodies, he believed, was

to be found the key to the successful treatment of many of the catarrhal diseases, if taken early. He had found Dr. Myles's cutting forceps to be most efficient and handy, allowing us to remove just such portions as indicated.

Dr. MYLES said that he had seen a number of cases in which it had seemed to him the turbinates had been unnecessarily removed. Teachers should insist upon saving the turbinates unless there was a distinct and definite object to be gained by their removal.

Dr. PHILLIPS said that in the cases of abscess of the septum that he had seen the cause had usually been traumatism. General practitioners should be alive to the possible serious consequences resulting from blows on the nose. Many nasal deformities had such an origin. He had never met with abscess of the nasal septum in very young children.

#### *Chronic Follicular Tonsillitis.*

Dr. W. SCOTT RENNER (Buffalo) said that chronic follicular tonsillitis was characterized by the formation of plugs of secretion resembling comedones. They were frequently the cause of an offensive breath. The tonsils themselves were often more or less hypertrophied, but not infrequently they were atrophied. Sometimes the patients complained of pain about the throat and ear, although occasionally they suffered from more or less obscure neuralgias. Patients who were subject to frequent attacks of quinsy were likely to have chronic follicular tonsillitis, and the removal of the tonsillar disease would do much to lessen the number of attacks of quinsy. Several cases were cited in which the voice had been impaired or a cough kept up by the plugging up of a tonsillar crypt. The first indication for treatment was to open and destroy every crypt, and the second was to remove or destroy all the diseased mass of tonsillar tissue. It was important that all adhesions between the tonsils and the pillars should be broken up before any attempt was made to excise the tonsil. The cold snare would often effect a more thorough removal of the tonsil than would the tonsillotome.

Dr. CLINE said that inflammation of the crypts and the small cheesy masses in the tonsils caused more suffering than perhaps any other one thing connected with the pharynx. A positive indication of trouble in the tonsil was indicated by a red ring around the tonsil involving the anterior pillar. His plan was to open the crypts, and to use chromic acid or a strong solution of nitrate of silver (40 grs. to 80 grs. to oz.), or with the galvano-cautery he would operate upon two or three crypts at a time, laying the crypt open and healing from the bottom.

#### *Otitic Brain Disease.*

Dr. C. A. THIGPEN (Montgomery, Ala.) reports the case of a patient who had an attack of *la grippe*, followed by earache, and later he experienced chilly sensations and elevation of temperature. Examination showed the drum membrane lustreless, and a perforation in Shrapnell's membrane. Hearing distance, watch at two feet. Temperature,  $101\frac{1}{2}$  Fahr.; pulse, 100. Behind the ear, at a distance of about two inches, there was slight swelling, with tenderness. In the immediate

vicinity of external auditory canal and mastoid region there was no swelling or tenderness. On exploratory incision over the swollen area he was surprised to find that there was a fistulous opening, which communicated with the cranial cavity. This opening was enlarged, and the lateral sinus and dura exposed. There was an extra-dural collection of pus, which came from the mastoid, which had perforated backwards, and the pus followed the groove for the lateral sinus. The mastoid was also opened, and purulent *débris* cleared away. The patient made an uninterrupted recovery.

The second case was one of chronic mastoiditis, with a fistulous opening in front of the anterior border of the sterno-cleido-mastoid muscle. The mastoid was carious. Its entire cortex was removed. The tympanic cavity was entered and the carious ossicles were removed. She improved rapidly, and was apparently cured. A few weeks after her discharge from the hospital she had a severe chill, followed by a high rise of temperature,  $106\frac{2}{3}^{\circ}$  Fahr., and profuse sweating. The lateral sinus was exposed, a sterilized needle introduced, and some blood withdrawn, which was found to be healthy. In its immediate neighbourhood, however, the bone was carious, and there was an offensive exudation. The patient's condition being very unfavourable, further operative interference was not advisable. The dressings were completed, and she was placed in bed. She reacted very slowly, but surely, and made a rapid recovery.

Third case was that of a man who had had *la grippe*, complicated by earache in right ear and a diffuse pain in right side of head. Upon examination the drum membrane was found to be red and bulging. Paracentesis was performed, which gave immediate but only temporary relief. In two days his pain returned with increased severity, and his temperature ranged from  $101^{\circ}$  Fahr. to  $104^{\circ}$  Fahr. The mastoid was opened, but no pus was discovered. All pain in ear and head ceased immediately, but his fever continued and he developed pyæmia, which kept him in bed for three months, at the end of which time he was discharged entirely well.

Fourth case was a young man, nineteen years of age, who suffered from otorrhœa for several years. Recently there had developed severe headache and vertigo, with nausea and vomiting.

When first seen his temperature was  $102^{\circ}$  Fahr. There was an offensive discharge from his left ear, and the mastoid region was painful on pressure. There was great stupor. The mastoid was opened, and pus and granulations were removed. The middle cranial fossa was also entered and an extra-dural collection of pus removed. On account of his weakened condition no further explorations were made. He reacted well from the operation, and the next day developed a slight twitching of facial muscle of right side, which continued for two days. An opening was made over the facial centre, which disclosed a localized purulent meningitis, and about two ounces of thick pus was removed. No sooner had the effects of the anæsthetic passed away than violent convulsions of right side ensued which continued, with intervals, until the next day, when he died.

The autopsy revealed a large abscess in left temporo-sphenoidal lobe, which pressed on the internal capsule. There was also a fistulous opening in the tegmen tympani.

*Otitis Media, with Thrombosis of the Sinus and Jugular Vein.*

Dr. EWING W. DAY (Pittsburg) said that on December 25th, 1896, Mary F., eight years of age, had been admitted to hospital with a swelling over the neck, which broke upon examination, discharging its contents into the pharynx. She rapidly became septic. The right ear discharged offensive pus freely, but deep pressure did not show any tenderness. On opening the mastoid there was an unusual amount of venous hæmorrhage. The inner table was purulent and necrosed. A sinus led downward through the sterno-cleido-mastoid muscle, thus explaining the origin of the abscess in the neck. The jugular vein was found collapsed. The patient was much better after this operation for a day or two, and then it became necessary to expose the lateral sinus. There was again free venous hæmorrhage. The sinus was exposed, and the opening found which led to the mastoid cells. The patient's condition being extremely bad, the operation was hastily finished. For the next few days the patient suffered from an acute toxæmia, and hung between life and death. A collection of pus was subsequently opened in the right digastric fossa. In February the temperature rose to 103° Fahr.; there was profuse and offensive expectoration, and evidence of a septic infection in the lung. From the latter part of February convalescence was uninterrupted. The chief points of interest were: perforation of the bone through the digastric fossa, and the unusual course taken by the pus into the pharynx; an obliterating phlebitis of the jugular which, to a great extent, protected the lungs and other organs from infection; and the breaking down of this thrombus and the formation of a second abscess in the neck.

Dr. W. H. DALY (Pittsburg) said that these two papers were very instructive, and reflected the greatest credit on the gentlemen connected with them.

Dr. E. B. DENCH said that, at the last meeting, he had reported two cases of intracranial complications of middle-ear disease that had been successfully treated by operation. Since then he had had three cases of sinus thrombosis. The third case was an infant upon whom he had performed a mastoid operation one year before. In the interval the child had been perfectly well. On opening the site of the former operation, he found extensive caries of the bone and the sinus occluded by a thrombus. This was removed and the wound packed. Recovery ensued. In another case the patient was a man, twenty-two years of age, presenting all the signs of mastoiditis. The ordinary mastoid operation was done. About four days later the temperature rose to 105.5° Fahr., and on exposing the sinus a thrombus was found and removed. In another case there was beginning involvement of the lateral sinus, which was only discovered near the completion of the mastoid operation. The wound and sinus were packed with iodoform gauze, after free incision of the sinus, and the patient recovered without further trouble. These

cases abundantly confirmed the position assumed by the speaker at the meeting held one year ago, regarding the wisdom of radical and early operation in these cases.

Dr. F. L. JACK (Boston) said in mastoid operations it was always difficult to decide just how far the operation should be carried. He referred to one case—an acute case—in which pus was removed from the mastoid cells. The temperature fell immediately after the operation. After a week there was chill and fever, and on second operation a very minute spot of softened bone was found near the lateral sinus, and removed. He was quite sure that this was not present at the first operation. The patient became pyæmic, and finally died.

Dr. THIGPEN said, in his closing remarks, that he always stated to his patients with mastoid disease that it was quite possible that a second operation might be necessary. It was his practice to have the temperature taken every two hours after the operation, as he had found from sad experience that this was important.

(To be concluded.)

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## ABSTRACTS.

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### DIPHThERIA, &c.

**Katz, O.**—*Contribution to the Study of Diphtheritic Paralysis.* "Archiv für Kinderheilk.," Band XXIII., Heft 1-3.

THE author reports and criticizes the results obtained by other observers from the earliest times up to the present time; then reports in detail the clinical history and *post-mortem* examination of three cases.

The following is a short summary of his conclusions. The changes in the nervous system in diphtheritic paralysis are first of all diseased conditions of the ganglion cells, and, secondly, degenerative changes in the nerve fibres in trophic relationship to these ganglion cells. The ganglion cells (1) are killed outright, in which case their processes, specially the axis cylinder processes, also die; or they (2) are less violently affected and undergo degenerative changes with accumulation of fat globules, and the nerve fibres undergo secondary trophic changes, becoming split up and broken down. In the latter case the fat globules may be absorbed and *restitutio ad integrum* is possible, just as it is possible in kidney epithelium, heart muscle, etc.

A neurose affected by these slighter changes will respond not to gentle but only to strong stimulation; hence the difficulty, *e.g.*, of swallowing bland fluids like milk, and the comparative ease of swallowing firmer or more irritating substances. These nerve conditions further explain the weakness, heaviness, loss of appetite, dull speech, etc., etc., of patients convalescent from diphtheria.

The medulla oblongata is more severely and earlier affected than the spinal cord. The spinal cord, however, is affected even in slight cases—as is demonstrated by the condition of the patellar reflex—both sensory and motor paths being involved. Why the medulla should be specially non-resistant to the diphtheric poison cannot be explained by anatomical investigation alone, but the unceasing activity of the medullary centres and their comparatively rich blood (and therefore

poison) supply are suggested as possibly important factors. The posterior roots, specially in the region of the patellar reflex, were severely affected in the author's three cases.

The oculo-motor symptoms in diphtheria are easily explained by the degenerative changes found in the nerves, but in the production of the accommodation symptoms probably both nerve and muscle degenerations take part.

The palatal paresis or paralysis is also of central origin. Finally the author considers that the anatomical changes found by him in the medulla and cord are sufficient to explain all forms of paresis and paralysis, of anæsthesia and paræsthesia, that occur in cases of diphtheria.

*Arthur J. Hutchison.*

**Klein, A.**—*The Operative Treatment of Diphtheritic Stenosis of the Air Passage and its Results.* "Arch. für Kinderheilk.," Band XXIII., Heft 1 to 3.

THIS paper commences with a survey of the history of tracheotomy and intubation in diphtheritic stenosis, from the time of Bretonneau, Trousseau, and Bouchut, showing how "tubage" introduced by the latter was completely forgotten till reintroduced by O'Dwyer, and, further, how its position remained more or less doubtful till the introduction of serum treatment. The second part of the paper contains a long analysis of the results obtained in the diphtheria wards of the Kaiser und Kaiserin Friedrich Kinderkrankenhaus.

At first the results of intubation were not encouraging; consequently, the number of cases intubated fell off to thirty-seven cases, with nine cures = 24·52 per cent. With the introduction of serum treatment they rose again, so that in 1894—There were intubated: without serum, 87 cases ..... Cured, 18 = 20·69 per cent. And ,, ,, with serum, 68 ,, ..... ,, 37 = 54·41 ,, And in 1895 ,, ,, 102 ,, ..... ,, 67 = 65·68 ,,

The year 1894 is specially interesting, showing the results obtained by intubation in cases treated with and those treated without serum. Since the introduction of serum treatment the number of cases requiring surgical treatment has greatly diminished, and it has become quite rare for stenosis to develop in hospital. Again, in the earlier cases tracheotomy was very frequently required after intubation; but now that comparatively rarely is the case.

The only contraindications to intubation are—

1. When the patient is moribund, or there is very great weakness of the heart.
2. Septic diphtheria.
3. Severe pharyngeal dyspnœa, with œdema introitus laryngis.

The author next discusses the question of the time at which intubation should be performed, the difficulties of intubation, and the causes of death. He states that if the introduction of the tube is not followed by coughing the prognosis is bad. With cases treated with serum an attempt may be made to extubate after twenty-four to thirty-six hours. In two-thirds of all cases that recovered, all symptoms of stenosis had disappeared in three to four days. The author cannot agree with Escherich and others that, if the tube cannot be removed after about five days, secondary tracheotomy must be performed. Secondary tracheotomy is required (1) when intubation is followed by increased dyspnœa; (2) when it is impossible to permanently remove the stenosis.

Of complications, such as are not uncommon after tracheotomy—suppurations, hæmorrhages, etc.—the author has none to report, and only one of pneumonia from food getting into lungs. As to pressure effects—ulcers, etc.—of twenty-six cases treated without serum there were found, *post mortem*, decubitus of slight or moderate degree, eight times; perichondritis, once; thirteen treated with serum, six times.

Turning next to tracheotomy, the author gives in tabular form the results obtained, but does not discuss them at all fully. In nine cases the difficulty of removing the tracheotomy tube was got over by secondary laryngeal intubation.

Lastly, the author is of opinion that, with a capable nurse, intubation may be as safely used in private practice as tracheotomy. *Arthur J. Hutchison.*

**Theodor, W. F.**—*Diphtheria and Serumtherapy.* "Archiv für Kinderheilk.," Band XXIII., Heft 4, 5.

FROM October, 1894, the author has treated all slight cases of diphtheria by his old method, without serum, but to all cases that were not likely to recover under that treatment he gave serum. A table is given showing the details of thirty-four cases treated with serum. The diagnosis of diphtheria was confirmed in all but one case by bacteriological examination. Four cases terminated fatally, but only one of these came under treatment before the fourth day. There were practically no complications; now and again slight cutaneous irritation—now and again traces of albumen in the urine for a day or two; but whether these were due to the diphtheria or to the serum could not be decided.

In cases of so-called scarlatinal diphtheria (twelve cases), Loeffler bacilli were never found, but strepto- and staphylococci, and small plump rods. This is in contrast with Ranke's observations. *Arthur J. Hutchison.*

**Wilson.**—*Nervous Deafness in Diphtheria.* "American Journ. of the Med. Sciences," Oct., 1897.

THE case is reported because sudden bilateral total deafness in diphtheria is exceedingly rare, and because the false membrane on the tonsils disappeared rapidly after the administration of an efficient dose of antitoxin. A married woman, aged thirty-three. Complained of sore throat on November 12th, 1896, small patches being found on one tonsil, with congestion of the palate and the other tonsil.

14th. Throat less painful, but greyish exudate on right tonsil. Hearing impaired, and distressing tinnitus heard all over the head.

15th. Constant roaring in the head and ears. Conjunctivitis exudate on both tonsils. Rapidly increasing deafness. Antitoxin—one thousand five hundred units of Behring's serum injected at ten a.m. At five p.m. total loss of hearing and great conjunctival chemosis. No pain in or about the ear, nor tenderness on pressure.

17th. Membrane in throat disappeared. Both tympanic membranes bright red, glistening, and not bulging. Some doubt as to bone conduction. The Klebs-Loeffler bacillus was not found by the bacteriologists.

18th. From this time, for a week, pilocarpin injections, and full sweating induced by them.

19th. Tinnitus continues. Loss of power in the muscles of the back of the neck.

29th. No hearing, and voice very imperfectly modulated.

December 4th. Tinnitus, constant and distressing. Membrana tympani quite normal.

19th. Amyl nitrite inhaled to see if deafness was due to anæmia of the internal ear. The tinnitus was enormously increased.

February 24th. Tinnitus continues, with some vertigo and disturbance of the equilibrium. Deafness absolute. All these symptoms continued up to May 1st, when the report of the case was made.

In spite of the negative character of the bacteriological examination, the case is believed to be one of diphtheria. The nature of the throat lesion, the exudate developing after local lesions presenting the phenomena of lacunar tonsillitis, the

rapid disappearance of the pellicle leaving superficial erosions after the injection of antitoxin, and the impairment of accommodation and double vision, together with loss of power in the muscles of the neck, are relied on to establish the diagnosis.

We must note that no reaction followed the injection, and various other drugs were being used—*e.g.*, calomel and iron internally, and gargles and swabbing of peroxide of hydrogen—so that the effect of the antitoxin is not quite so definite to trace as if it had been alone employed.

*Barclay J. Baron.*

## MOUTH, &c.

**Carré.**—*The Strepto-Bacillus of Malassez-Vignal as Factor of Anginas.* "Lyon Méd.," May 2, 1897.

EXAMINING one hundred and forty cases of anginas, he has found four times the strepto-bacillus of pseudo-tuberculosis discovered by Malassez and Vignal; twice isolated, twice associated with the diphtheria bacillus. In these four cases the disease was very serious; in one it appeared in the course of throat disease, an infectious broncho-pneumonia. He gives the technique of cultures. *A. Cartaz.*

**Jullien, L.**—*Primary Ulcer of the Tonsils.* "Annales de Dermat.," Vol. VIII., p. 275.

HE relates a rare case of bilateral chancre of the tonsils in a girl seventeen years of age. The syphilis had been inoculated by the sucking of the nipples of a parent recently delivered, for applying the nipples to nursing. The woman had been contaminated by the husband. The two tonsils are invaded by large ulcerations; dense, with voluminous and hard enlargement of cervical, retro-occipital, mastoid, and axillary glands.

*A. Cartaz.*

**Turner, W. A.**—*Note on the Course of the Fibres of Taste.* "Edin. Med. Journ.," Sept., 1897.

THE author supports Gower's view that taste impulses from the anterior two-thirds of the tongue enter the brain *via* the fifth cranial nerve-root. What appears to be a crucial case was recorded by Ferguson in 1890. During life complete loss of taste had existed on the anterior two-thirds of the left side of the tongue, while the posterior third, the fauces, and soft palate retained the sense of taste.

*Post-mortem:* a small exostosis was found to press upon and divide the left vidian nerve. Microscopic examination revealed degeneration of the great superficial petrosal, traceable to the geniculate ganglion, and along the facial trunk to the chorda tympani, and on to the lingual nerve.

Krause's cases of excision of the gasserian ganglion also support this view.

If Dixon's view were correct, then destructive lesions of the facial nerve-root in its course from the pons to the internal auditory meatus ought to produce abolition of taste sensation. But this is not found to be the case. In a case reported to the writer by Dr. Alex. Bruce, in which the symptoms pointed to implication of both the seventh and eighth nerves in the posterior cranial fossa, taste was unimpaired on both sides of the tongue.

The point meantime remains dubious, "although clinical evidence is in favour of the root of the fifth cranial nerve."

*Arthur J. Hutchison.*

## NOSE, &c.

**Brian.**—*Chondroma of Nasal Fibro-Cartilages.* "Lyon Méd.," April 18, 1897.  
A MAN, aged fifty years, alcoholic, with acne and red-pimpled nose. In 1883 a little nodule appeared on the left part of the nose, and gradually increased to a growth as large as a nut. The increase was accelerated by cauterization.

On examination the nose appeared as a large and voluminous rosaceous tumour, with parts of sphacel. The tumour is translucent, and does not invade completely the nasal cavities. Operation by Poncet with excellent plastic result. The tumour was a chondroma of fibro-cartilages. A. Cartaz.

**Forestier.**—*Primary Subacute Suppurative Sinusitis Frontalis. Perforation of the Anterior Wall of the Sinus. Unusual Tracking of Pus Upwards through the Diploe and Perforation of the Internal Table. Septic Meningo-Encephalitis. Death.* "Arch. Intern. de Lar., Otol., Rhin.," July, Aug., 1897.

THE patient was a man of forty-eight, who, since a time of exposure in the campaign of 1870, had complained of frequent frontal headaches and marked susceptibility to cold, so that a warm cap was essential to comfort in winter.

During 1896 headaches became more frequent. In October, 1896, the forehead became painful, tender and swollen, while a muco-purulent discharge appeared in the nose.

On November 24 a fluctuating tumour appeared on the forehead, the nasal discharge having ceased. This abscess was opened, but matters became more grave, and on December 1st coma had set in. The author then saw the case, and operated immediately. He found a large perforation of the anterior wall of the frontal sinus on the right side, and absence of median septum. The posterior wall was intact throughout, but the roof on the right side was destroyed. The fronto-nasal canals were permeable. Removing the outer table of the frontal, the diploe appeared hollowed out into irregular spaces filled with pus. On the right side this suppurative condition of the diploe was traced upwards to the highest point of the frontal bone, where the probe detected a perforation of the internal table at least one centimètre in diameter. The dura was covered with pus. Death followed, and autopsy was refused.

This accident of distant tracking of pus with subsequent perforation into the subdural space is extremely rare—if, indeed, it is not unique; and an explanation of a satisfactory character is not forthcoming.

The history of the case would seem to indicate the presence of chronic catarrh of the sinus or latent empyema. The more or less sudden exacerbation of symptoms followed on lumbar pains and other acute signs of fever, and was probably of influenzal origin. The coincidence of active suppuration with blocking of the duct was doubtless the immediate cause of the tracking of the pus, but the causes determining the route followed are obscure. Ernest Waggett.

**Gouguenheim, A.** (Paris).—*On the Inflammatory Abscesses of the Nasal Septum.* "Archiv für Laryng. und Rhin.," Band V.

THIS affection is seldom observed, although its usual cause coming frequently into play would lead us to expect the reverse. In 1890 the author reported two cases in which the disease was followed by a deformity of the nose; but in his subsequent cases, which form the basis of the present monograph, no such change occurred, and he therefore considers it as quite exceptional.

External injuries are almost the sole cause. Children are most subject, owing to their liability to fall on the face. In adults it may follow a blow.

The abscess is nearly invariably situated at the antero-inferior part of the septum. It develops quickly, and almost closes the nasal fossa. As a rule it is bilateral, and the cavities communicate, but occasionally the abscesses may be quite separate. In some rare instances the abscess is found on the perpendicular plate of the ethmoid.

The symptom first experienced is nasal obstruction. When the affection has been present for some time the inflammation extends to the orifice of the nose and attacks the skin, causing it to become tense, red, and crissipulous-like. Mucus and pus may also be discharged from the nose, and give rise to fetor.

The intranasal swelling develops very quickly, passing to the nostrils, and occasionally even protruding beyond. Some writers hold that the presence of blood precedes that of pus, but the author expresses no definite opinion on this point. In appearance the swelling is of a pale reddish-grey colour; rarely it is blue, suggesting blood within. It feels hard, but yields to pressure; sometimes it even fluctuates.

The walls of these abscesses are hard and thick, and the pus is usually distant from the surface. To allow its escape the incision must be deep. The pus contains a large number of staphylococci as a rule.

The diagnosis is easy, although the condition has been mistaken for polypus. A gumma develops slowly, and is usually accompanied by changes in the mucous membrane in other parts of the nose. Abnormalities in the shape of the septum following injury may be distinguished by the probe.

As soon as the abscess is recognized it should be opened by knife or galvanocautery point. The incision should be made as high as possible, and must be deep on account of the thickness of the walls. The one incision sometimes suffices to empty the abscess in both nasal fossæ. The abscess cavity should afterwards be syringed with a saturated watery solution of boric acid, and iodoform gauze then applied. One or two days later the hanging pouch of the pus sac may be snared. The wound soon cicatrizes, and this may be aided by painting with an oily solution of menthol. For some days nasal washes should be used.

The author describes six cases which he has treated.

*A. B. Kelly.*

**Hammond, L. J.** (Philadelphia).—*Hard Fibroma of the Maxillary Sinus, with Pyæmia of the Frontal Sinus.* "Philadelphia Polyclinic," August 7, 1897.

IN this case there was considerable necrosis of the nasal bones, owing to the nature of the man's work. There was also purulent discharge from the frontal sinus through the infundibulum. The tumour, which proved to be a fibroma, filled the maxillary sinus, adhering to the whole of the posterior wall. By an incision through the lip the soft tissues were raised up to the nasal orifice, and the sinus opened on a line with and external to the nasal process of the superior maxillary bone. As much as possible of the growth was removed with a Wild's snare, the remainder with a curette, and the cavity packed with gauze on account of the free bleeding.

The frontal sinus was then opened through an incision made directly over the promontory of the roof of the nose, carried above the superciliary ridge. It was found to be filled with pus and granulation tissue. This was cleared out, the sinus packed with sterilized gauze, and drainage made through the most dependent point in the incision. The patient made a good recovery, and the result of the operation proved most satisfactory.

*St George Reid.*

**Hughes, P.**—*Ozæna and its Treatment by Interstitial Cupric Electrolysis.* "Thèse de Lyon," 1897.

THE author relates the results of the treatment of seventeen cases by Capart and Cheval's method—viz., interstitial electrolysis. The current must not exceed ten

or twelve milliampères. Out of this number of cases, three under thirty years of age have been cured; two under twenty probably cured; six well ameliorated; and the remainder in a stationary state, and without benefit. *A. Cartaz.*

**Killian.**—*On Intercommunicating Frontal Sinus.* "Munch. Med. Woch.," Aug. 31, 1897.

THE author describes three cases of frontal sinus empyema in which the frontal septum was perforated. Perforation of the septum may be—

1. Anatomical, analogous to the foramen accessorium of the antrum maxillare.
2. Pathological: (a) produced by pus in one sinus forcing its way into the other; (b) produced by injury.

It must be a very rare anatomical condition. Zuckerkandl does not mention it once. Macerated specimens are misleading, because often the bony septum is incomplete, but the membranous septum always fills up the defects. The author, however, was able to show one anatomical specimen. The mucous membrane of each sinus was apparently normal, but in the membranous portion of the septum frontale was an opening, with smooth rounded edge and about the size of a lentil.

In cases of frontal empyema the condition is not so rare.

A short list of cases reported is added to the paper. *Arthur J. Hutchison.*

**Klippel.**—*Troubles of Gustation and Olfaction in the Tabes Dorsalis.* "Arch. de Neurologie," April, 1897.

THE author has noted frequent perturbations of these senses in tabetic patients; they are variable, from the total and absolute loss of the sense to simple diminishing, partial, hemilateral, or total. Sometimes appear true perversions (calosmia), or hyperæsthesia (hyperosmia) or reflex troubles. These symptoms are due to (1) alterations of the special sensitive nerves—glosso-pharyngeal or olfactive; (2) to lesion of the divisions of trigeminic nerve which regulates the nutrition of nasal and lingual mucous membranes; (3) sometimes to a primary alteration of muscular sense, giving the dislike. Constantly these troubles are associated with other bulbar symptoms. *A. Cartaz.*

**Leland, George** (Boston).—*Nasal Obstruction with reference to Aural Disease.* "Boston Med. and Surg. Journ.," Aug. 26, 1897.

THE author deals at length with the various changes in the nasal and naso-pharyngeal cavities leading, either directly or indirectly, to morbid changes in the middle ear and Eustachian tube. He is of opinion that very many cases of pulsating tinnitus are due to engorgement of the turbinates or to a congested state of the naso-pharyngeal mucous membrane from the presence of adenoid growths, etc. He draws attention to the necessity in these cases of re-establishing proper nasal respiration by the removal of the obstruction by proper operative measures. *StGeorge Reid.*

**Lenzmann, R.**—*On the Operation for Adenoids, with Special Reference to the Question of Narcosis.* "Therapeut. Monats.," Sept., 1897.

THE author first discusses the reasons for and against the use of narcosis in this operation. Most of the arguments against narcosis he considers unsound. It is seldom possible to complete the operation with one sweep of a Gottstein's knife, and even when this is the case the operation is far from painless. Simple examination of the naso-pharynx with the finger is extremely unpleasant, even for adults, and terrifies children.

Naturally, the operation is much worse. This alone justifies the use of chloroform. Further, as we now know that a careless removal of only some of the growth

will not necessarily lead to atrophy of the remainder, we are bound in every case to remove the growth thoroughly, and this thoroughness can be attained to only by operating under narcosis.

That this operation makes the use of narcosis in some points specially dangerous the author does not deny; still, he maintains that by care and a suitable technique these dangers can be overcome.

The author has operated on four hundred cases, with no deaths—indeed, with scarcely any unpleasant incidents during either the operations or convalescences. He operates with the patient in the erect sitting posture, does not narcotize deeply, and uses no gag, but only a tongue depressor. If the tonsils are hypertrophied he operates on them (with Mackenzie's tonsillotome) at the same sitting. His Gottstein's ring-knife has a special apparatus for holding the excised portion of the growth, and its handle is so curved as to facilitate its introduction and use even when the mouth is not wide open.

Lastly, the author advises that after the operation the parts should be left undisturbed. No insufflation of powder; no nasal or post-nasal irrigations or pulverizations.

*Arthur J. Hutchison.*

**Malosse.**—*Analysis of a Rhinolith.* "Bull. Méd. Algérie," Feb. 10, 1897.

THE nucleus of rhinolith was formed by three parts of organic substances and one part of mineral, with predominance of iron. The wrapping is, as ordinary, formed by calci and magnesia phosphates.

*A. Cartaz.*

**Naegeli, Akerblom** (Ruthi, St. Gallen).—*On Narcosis in the Operation for Adenoids.* "Therap. Monatsch.," Oct., 1897.

THE author is not in favour of the use of narcosis for adenoid operations. In the first place, not every operator can afford the time or has the necessary assistance at hand. Secondly, a badly trained or nervous child objects to and struggles against chloroform or bromethyl just as much as against the operation. Moreover, the operation could be done many times over in the time required to get the child narcotized. Children, or their parents, may object to various minor operations being done without narcosis; they often object to digital examination of the nasopharynx. Are we on that account to give chloroform? Are no more teeth to be extracted without narcosis? Of 1106 patients Hofmann lost one, and of 1500 Thost lost none; still the author considers this a serious mortality contrasted with the statistics of narcosis, *e.g.*, in child-bed.

Narcosis may possibly be advantageous when adenoids and tonsils have to be operated on at the same sitting, but that should rarely occur.

After some strong remarks on "four-week specialists," their incapacity, and their large fees, the author concludes: "Never will I willingly perform a large operation without narcosis—still less a small operation with it; and I believe that many of my colleagues, specially those who have to rely on themselves, and who cannot at any moment command a number of assistants, will share my opinion."

*Arthur J. Hutchison.*

**Rafin.**—*Frontal Sinusitis and Cerebral Abscess.* "Lyon Méd.," June 13, 1897.

A WOMAN, aged twenty-five, complained in 1894 of some pains, after an attack of influenza, that she had in frontal sinus and eyebrow. Opening of subcutaneous abscess with pieces of osseous sequestræ. Some months later, blindness by optic neuritis. The author diagnosed "fronto-ethmoidal sinusitis." Operation in July, 1896; opening of frontal sinus, curetting, and drainage of ethmoidal cells, which are not inflamed. In the posterior part of frontal sinus little tumefaction; explorative puncture in the brain without results; relieving of headaches.

In September, operation by incision of meninge, and discharge of large abscess in the frontal lobe. In January, after a period of complete recovery, convulsive attacks. Trepanation in the upper part of frontal sinus; opening of the primitive suppurating area, without traces of suppuration. Complete cure, with a little fistula of ethmoidal cells.

A. Cartaz.

**Sachs, R.**—*Primary Tubercular Growths in Nose and Larynx. Operation.*  
Cure. "Münch. Med. Woch.," Sept. 21, 1897.

THE author reports four cases, two of primary tubercular tumour in the nose and two of same in larynx.

In both nasal cases the tumours grew slowly from the anterior portion of septum cartilagineum. Both were treated by cold snare, scraping, and application of lactic acid, with satisfactory results.

In one of the laryngeal cases the tumour was situated on the posterior wall of the larynx. It was removed with cutting forceps (Kirstein's autoscope being used), and the base canterized. In the other case the growth arose from both vocal cords and the laryngeal surface of the epiglottis. It was removed by cutting forceps in several sittings. In neither case could any other indication of tuberculosis, in lungs, etc., be discovered. In all four cases diagnosis was confirmed by microscopic examination.

Arthur J. Hutchison.

**Schmiegelow, E.** (Copenhagen).—*On Acute Osteomyelitis of the Superior Maxilla.* "Archiv für Laryng. und Rhinol.," Band V.

THE author reports the following case:—A girl, the child of healthy parents, who had no syphilitic antecedents, when ten weeks old became suddenly very fevered, had slight convulsions, and some days later the whole of the right superior maxillary region became greatly swollen. Her general health suffered much in consequence, and she lay in a dazed state. A week later a small abscess, which had formed on the inner side of the alveolar process opposite the canine, burst, affording some relief. The pus found a free exit, however, only after the canine had been extracted. The symptoms then began to subside, while small sequestra were frequently expelled. A quantity of foul-smelling pus flowed from the right nostril. The general condition gradually improved.

When the child came under the author's care about two months after the onset of the illness, the right cheek was swollen, pus welled out of the right lachrymal canal, and there was marked periosteal swelling of the alveolar process extending over the hard palate to the middle line. A fistula discharging pus indicated the site of the canine. On examining the nasal cavity the lateral wall was found to be broken down, and bare bone and loose sequestra were felt in all directions. The parents were instructed to syringe through the fistula several times daily. Three and a half years later the child had grown well, but there was still some discharge from the right nostril.

The diagnosis is based on the acute onset, the formation of an abscess which discharged partly by the alveolar process and partly by the nose, and the resulting necrosis of the superior maxilla.

The author discusses more particularly necroses of the jaws. Acute osteomyelitis of the lower jaw is very rare; but of the upper he cannot find a case described as such on record. Extensive or total necrosis of the superior maxilla may be caused by phosphorus, or by an acute exanthematous affection. There is, however, a third group of cases in which the cause is unknown. The author places his case in this category, and considers that two others which have been reported as cases of empyema of the antrum of Highmore should be classed with it. In these three instances the patient was an infant, and the author thinks that this explains the

origin of the disease. The maxillary sinus in the newly born is filled with a thick lining of connective tissue. If this becomes the seat of a phlegmonous infiltration, the conditions for retention with extensive necrosis of the walls exist. The purulent infiltration of the superior maxilla presses the rudimentary teeth through, and they fall out.

The treatment consists in providing an exit for the pus as soon as possible. If one or two of the teeth that project through the gum be removed, access to the antrum can usually be gained. The cavity can then be syringed out several times daily. Loose sequestra must be removed, but an operation in order to get rid of all the dead bone is not to be recommended, on account of the doubtful cosmetic result.

*A. B. Kelly.*

**Sicard, J.**—*Chondromatous Tumours of the Nasal Fossæ.* "Thèse de Paris," 1897.

CHONDROMA of nasal cavities is a rare disease (the author has collected only twenty-nine cases in literature), which appears, especially in the man, between seven and twenty-five years. Rarely composed of pure cartilage. These tumours are ordinarily mixed—osteochondromatous, fibrochondromatous, myxo- or sarcomatous chondroma. Little by little by degeneration they can form a true malignant tumour. They are originated from all parts of the nasal cavities, but in preference from the septum. The author enumerates the symptoms, diagnosis, and treatment. Of the twenty-nine cases, nine were fatal, and five have had recurrences after operation.

*A. Cartaz.*

**Siebenmann.**—*On the Adenoid Habit and Long Face, and on the Short Septum in Broad-Faced People.* "Münch. Med. Woch.," Sept. 7, 1897.

THE object of this paper is to prove that high arching of the hard palate is not more frequent in people with adenoid growths than in people with a perfectly healthy naso-pharynx. The palatal index (*i.e.*, the height of palate divided by breadth between second molars multiplied by 100) was obtained in a number of people with and a number without adenoids, with the result that the average index of those free from adenoids was about 46, while the average index of those suffering from adenoids was 45.9. It is to be noted that the result in the first series is really too low, because all cases with deviated septa were excluded. In them the average was about 56.

Why, then, should laryngologists generally agree that adenoids and highly arched palates go together? The answer to this question is that high-arched palates occur in people with long narrow noses, in whom any obstacle to breathing is felt much more than in broad-nosed people. Hence the laryngologist is far oftener called on to remove adenoids in the former than in the latter; hence, again, the misleading statistics.

A further series of measurements proved that the amount of arching of the palate was in relation to the upper facial index (*i.e.*, distance from naso-frontal suture to edge of superior alveolar process divided by extreme breadth of face at molars multiplied by 100), and apparently uninfluenced by the presence of adenoids.

Lastly, a series of measurements were undertaken to test the truth of Hoppmann's assertion that *ozæna* is always accompanied by a relatively short sagittal measurement of the septum. These, again, proved that the sagittal length of the vomer measured in the inferior meatus depends entirely on the type of face, and that this condition, considered by Hoppmann as peculiar to *ozæna*, is really common to all broad-faced individuals (*i.e.*, whose facial index is under 50).

*Arthur J. Hutchison.*

**Valude.**—*Ophthalmoscopic Diagnosis of Cerebral Complications in Disease of the Sinuses.* "Arch. Intern. de Lar., Otol., et Rhin.," July and August, 1897.

In this lecture, delivered in Dr. Luc's clinic, the author describes the characteristic appearances of choked disc and simple papillitis. It has been shown by experiment that the phenomenon of choked disc may be due to intracranial infection, as well as to mere intracranial pressure, such as is caused by the presence of tumours. A choked disc, as well as papillitis, is, therefore, good evidence of intracranial mischief arising from sinus disease, although such mischief need not necessarily be of the most serious character. In proof of this qualification, an instance is related in which mastoid disease was accompanied by some degree of choking of the vessels of the papillæ. Operation proved that the lateral sinus was not invaded, though laid bare by the suppurative process.

The investigations of Berger have shown that some cases of retrobulbar neuritis are dependent on disease of the sphenoidal sinus, from which cavity the optic nerves are often separated by the thinnest shell of bone, or by the soft tissues alone.

In cases of this class—formerly termed "*à frigore*"—vision may be lost in the course of a few days by invasion of the nerve from the infected sinus without any appearance of papillitis or choked disc. The absence of these phenomena is due to their dependence exclusively on true intracranial disease—a circumstance easily explained by anatomical consideration of the blood supply of the optic nerve.

By the spreading of the infection brainwards true intracranial disease may be set up and papillitis follow. Moreover, where the neuritis is permanent in its effects the appearances of optic atrophy will finally develop in the disc. An unfavourable termination is, fortunately, not invariable, sight being often wholly or partly restored; but in these cases of "toxic retrobulbar neuritis" or "*périnévrite canaliculaire*" the prognosis must always be regarded as serious. *Ernest Waggett.*

## LARYNX.

**Arslan.**—*Early Hereditary Syphilis of the Larynx in Children.* "Arch. Intern. de Lar., Otol., Rhinol.," July and Aug., 1897.

CONFINING himself to the disease as occurring in children under three years of age, the author gives a *résumé* of reports and opinions to be found in literature, and follows with a short account of six cases coming under his observation.

1. That of a child of three years presenting typical manifestations of congenital syphilis. At birth the voice was hoarse, and cough and coryza were present. Laryngeal symptoms slowly increased, in spite of antisyphilitic treatment. The voice was completely lost, and dyspnoea supervened. Tracheotomy was refused, and death ensued. The histology of the larynx is dealt with later.

2. The brother of the above, aged ten months. A few weeks after birth the voice became hoarse, and cough and coryza were present. Direct evidence of laryngeal syphilis was absent, but mercurial treatment was followed by cure in fourteen days.

3. A child of two, in a family where syphilis was suspected, though denied. Hoarseness, cough, and difficulty of breathing, with coryza, commenced during the second month. Symptoms gradually increased, and attacks of dyspnoea occurred. Micropolyadeny was present, but no actual sign of syphilis. Tracheotomy was refused. Thirty days of mercurial treatment removed the dyspnoea and improved the voice. In two months the child was well.

4. An infant of seven months, subject from the fourth month to hoarseness,

difficulty of breathing, and attacks of laryngo-spasm. Micropolyadeny. Cured at the end of two months' mercurial treatment.

5. An infant of two months who, a few days after birth, manifested difficulty of breathing, especially at night, and when crying. Nasal obstruction, micropolyadeny, enlargement of spleen and liver, diarrhœa, and vomiting were noted. No direct evidence of syphilis was present, but suspicious ulceration about the anus existed. Improvement in a week, and cure in two months, of mercurial treatment.

6. An infant of eighteen months still under treatment. Coryza, hoarseness, and attacks of dyspnœa from birth. No evidence of syphilis. Marked improvement after one week of mercury. In none of these cases was a satisfactory view obtained by laryngoscopy.

Returning to the symptomatology of the disease, the author points out that abnormality of voice, varying from hoarseness to aphonia, is invariably present.

When laryngeal obstruction is present it may be permanent and progressive, or subject to paroxysmal exacerbation due to temporary engorgement or cedema. Cough is not a constant symptom. Coryza is nearly always present. Anatomically the lesions are to be divided into the ulcerative and the hyperplastic, the so-called chronic superficial form being the initial stage of both.

Ulceration may be circumscribed or diffuse, deep or shallow, and the right vocal cord seems to be the seat of election. Deep ulcers invade and destroy the cartilaginous structures.

The hyperplastic form of the disease is very rarely met with under three years of age, and consists in a general infiltration and thickening of all the tissues.

Ulceration never occurs in this form, which nearly always has a fatal issue.

The first of the cases described above belonged to this class, and on *post-mortem* examination the larynx was found lined throughout by innumerable vegetations, which, encroaching on the lumen, reduced it to a mere chink.

The cartilages appeared normal, and externally the organ showed no signs of enlargement. A plate is subjoined in which the microscopic appearances in this case are figured. The extreme thickening of the mucosa with its papillated surface is well shown.

With regard to diagnosis, the important feature is the chronicity and the gradual increase of the signs of obstruction, taken in connection with other evidences of congenital syphilis.

The distinction between this condition and ordinary papilloma may be difficult. In the latter, however, the voice undergoes a more rapid alteration, and cough, which is strident, dry, and sometimes like that of croup, is present from the first. In syphilis the cough is often quite insignificant and even absent.

Prognosis should always be guarded on account of acute exacerbations which may supervene, and of the later changes, such as cicatricial narrowing.

The author has found Van Swieten's fluid act well, but if the case is grave mercurial frictions should be employed, and tracheotomy should not be postponed where stenosis is at all marked, or where the dyspnœic attacks are frequent.

*Ernest Waggett.*

**Baudrand.**—*Laryngeal Ulcerations after Tubage.* "Thèse de Paris," 1897.

THE laryngeal ulcerations after tubage occupy the anterior part of the cricoid ring, or at the inferior part of the arytenoids. They vary in depth and width according to the pressure of the tube and the inflammation of the mucous membrane. The symptoms are, according to their importance, hoarseness, aphonia, glottic spasm, and laryngeal stenosis. In that case it is necessary to give up the tube and make a tracheotomy.

*A. Cartaz.*

Fränkel, B. (Berlin).—*The Intralaryngeal Treatment of Cancer of the Larynx*.  
 "Archiv für Laryngologie und Rhinologie," Band VI., Heft 2.

THE author gives a report of the cases in which he has employed this method.

Case 1. Tumour as large as a bean, covering the middle fourths of the right vocal cord and projecting more than two millimètres beyond its free edge into the lumen of the glottis. The growth was snared and the base cauterized. There was recurrence, however; and a year later a second tumour was removed, and nine months later a third. Again, nine months later, there was more pronounced recurrence, the growth involving the anterior region of the true and false cords; and, in addition, a hard gland as large as a hen's egg had appeared on the right side, beneath the sterno-mastoid. The intralaryngeal tumour was again removed by snare and forceps, and was examined by Virchow and pronounced a cancer. The infiltrated gland was subsequently removed, and the examination of it confirmed the diagnosis. After a much shorter interval than formerly there was again recurrence in the larynx. This was very thoroughly removed by the author in June, 1884; but the galvano-cautery, which had been applied at each of the previous operations, was not used. Since then there has been no recurrence; and the patient, who is in his eighty-sixth year, enjoys the unimpeded use of his voice as formerly.

Case 2. A tumour as large as a bean was removed from the right vocal cord of a man aged fifty-seven. It proved to be a carcinoma keratoides. Nothing is known of the further course of the case.

Case 3. The patient, aged sixty-seven, had a growth on the left vocal cord, extending from the anterior commissure half way along the ligamentous part of the cord, and passing about eight millimètres into the subglottic region. This was removed and proved to be a simple carcinoma. Shortly afterwards a slight swelling was observed beneath the glottis anteriorly. Two years later this had increased considerably, and as much of it as possible was removed; its structure was the same as that of the other growth. A few months afterwards the laryngeal tumour had recurred. The patient was now advised to undergo an external operation, but declined. Tracheotomy was subsequently necessary, and the patient died about a year and a half later.

Case 4. A growth the size of a lentil was removed in June, 1887, from the anterior half of the right vocal cord of a man aged forty-nine. This proved to be a carcinoma keratoides. Up to the present (May, 1897) there has been no recurrence, and the patient's voice has been normal.

Case 5. A man, aged fifty-nine, presented a growth involving the entire left vocal cord. This was removed, and on examination found to be a simple carcinoma. There has been no recurrence, but the voice is somewhat weak and rough in consequence of part of the affected vocal cord having been taken away.

Case 6. A tumour was seated on the edge of the right vocal cord at its middle. The long axis of the growth was parallel with the cord, and measured eight millimètres, while from above downwards it measured six millimètres, passing into the subglottic region. The growth was partly removed and found to be a carcinoma keratoides. As it was impossible by intralaryngeal means to reach all that was situated below the glottis, laryngotomy was performed, and the vocal cord extirpated. There was no recurrence up to the time of the patient's death from apoplexy a year and a half later.

Case 7. A man, aged fifty-eight, presented on the surface of his left vocal cord, from the middle to the anterior third, yellowish nodules, which proved to be carcinomatous. The patient underwent a number of intralaryngeal operations. A year and a half, however, after coming under the author's care, laryngotomy was

indicated, and the anterior half of the affected vocal cord, and the subglottic tumour, were removed. The only discomfort the patient subsequently experienced was the care necessary in swallowing to prevent anything passing into the larynx. He was also quite hoarse. There was no recurrence in the larynx. More than a year later the patient returned with a large mass of glands in the neck, which were inoperable. Shortly afterwards he died.

Case 8. A man, aged sixty-six, had a tumour as large as a pea on the left vocal cord. This was radically removed in February, 1896, and examination showed it to be a carcinoma keratoides. In January, 1897, he presided at a meeting, and spoke uninterruptedly for about an hour. In April, when last examined, there was no sign of recurrence.

Case 9. A woman, aged fifty-three, had been hoarse for four months. A tumour-like thickening, involving the left vocal cord in almost its whole length, was found. The patient was operated on by Scheinmann. The growth proved to be carcinomatous. Nearly seven years later she reported that her speech was quite distinct.

Of these nine cases, five have been cured: Case 1, for thirteen years; Case 4, for ten years; Case 5, for nine years; Case 8, for fifteen months; Case 9, for six years. Two cases required subsequent laryngotomy, and of these, one (Case 6) died of apoplexy, but with a healthy larynx, two years after the operation; and one (Case 7) of glandular involvement. One patient (Case 3) died of cancer of the larynx after tracheotomy, four years subsequent to the first intralaryngeal procedure.

In addition to the cases above reported, thirty, collected by Hansberg and Sendziak, are on record, in which cancer of the larynx was treated by intralaryngeal means. If we leave out of account, however, the cases in which the procedure was employed merely as a palliative, and those in which only the epiglottis was removed, there remain twenty-two cases, of which twelve were cured—certainly a brilliant result.

The operation is not at all dangerous, and the result is not surpassed by that of any other method, for the patient not only retains his larynx but is able to speak in a loud distinct voice. The intralaryngeal operation is indicated only when it is possible to remove all the disease, and to reach healthy tissue. If in the course of this operation it is found that appearances have been deceptive, and that it is impossible to remove the growth radically, laryngotomy must be performed. The patient must be kept under observation after undergoing the intralaryngeal operation. If there is recurrence the prognosis is not worse than at first.

The author uses chiefly cutting forceps and curettes. Excepting the galvanocautery, he regards as applicable, however, any method whereby the tumour can be radically removed.

*A. B. Kelly.*

**Frankenberger.**—*Multiple Papillomata of the Larynx in Children.* "Annales des Mal. de l'Oreille," etc., July, 1897.

A CRITICAL review of various measures to be adopted in these cases. In the author's opinion the choice lies between removal *per vias naturales* or after laryngofissure. A case is reported in which the latter proceeding resulted favourably, and with restitution of voice. The danger to that function had to be faced in this instance, on account of the impossibility of getting a good view of the larynx, even under general anæsthesia.

*Ernest Waggett.*

**Gouguenheim and Quinard.**—*Surgical Treatment of Laryngeal Lupus.* "Annales des Mal. de l'Oreille," Aug., 1897.

It would appear that the treatment of lupus by laryngo-fissure has already been

practised by Brondgeest (of Holland), but the present case is the second to be found in literature.

The patient was a boy of ten, with laryngeal lupus secondary to lupus of the skin of the nose, in whom intralaryngeal treatment (curettage and lactic acid applications) practised three times a week for a year had failed to effect a cure. Laryngo-fissure was performed, and the interior of the organ, more particularly the posterior part of the supra-glottic region and the epiglottis, was found to be studded with greyish granulations. The epiglottis was removed entire, and all the granuloma tissue was scraped away with minute care, and with subsequent application of the cautery. In this proceeding the interior of the ventricles was not omitted. On the following day the tampon canula was removed, and in a week the boy could swallow without discomfort. At the time of the operation an infected lymphatic gland was found and removed, and the lupous lesion of the nose was destroyed. At the end of six months no recurrence had taken place.

Microscopic examination pointed to the acinous glands as the starting point in the larynx of the lesion, which was no doubt secondary to that of the skin of the nose.

Ernest Waggett.

**Kollofrath, O.**—*Removal of a Piece of Bone from the Right Bronchus "per Vias Naturales," with direct Laryngoscopy.* "Münch. Med. Woch.," September 21, 1897.

DESCRIPTION of a case. The patient, while eating a pork hash, swallowed a bone. Pain in throat, dyspnoea, cough, etc., at once came on and continued. When first seen in Prof. Killian's clinic the symptoms had subsided considerably. Examination with the laryngoscopic mirror failed to reveal anything indicative of foreign body. Only a short part of trachea could be seen, owing to lateral curvature in it. The bifurcation could not be brought into view.

Prof. Killian then examined with Kirstein's direct laryngoscope (autoscope), and after much twisting about of patient's head, body, shoulders, etc., finally managed to see the bifurcation. Something bright was seen in right bronchus, which might be bone. The patient bore examination with the autoscope extremely well, and it was then found that he could bear having a tube passed right into the larynx. A Mirulicz-Rosenheim œsophagoscope was passed down through the larynx and into upper part of the trachea, and through this the bone was removed by means of a specially made long tube-forceps. One or two small pieces broke off first, but in the end the large piece came away. It measured 17 by 14 by 8 millimètres.

Arthur J. Hutchison.

**Magenau, C.**—*On the Value of Phenolum Sulpho-ricinicum.* "Münch. Med. Woch.," September 14, 1897.

In the clinic of Prof. Jurasz a number of patients have been treated with sulpho-ricinate of phenol, 20 per cent. and 30 per cent. solutions being generally used.

Forty-five of the patients suffered from phthisis laryngea. Of these, seven disappeared after two visits; many who were improved ceased to attend. Of those in hospital the majority had advanced lung disease, and so were not suitable subjects for treatment. Decided improvement was noted in twelve cases, slight improvement in nine cases, no improvement in six cases. Almost all patients felt improved by the treatment; the irritating tickling and burning in the throat diminished, and pain on swallowing grew less; cough also frequently was improved, and voice grew clearer. Ulcers cleared and began to heal. Infiltrations, specially those of the true cords and posterior wall, dwindled. Thickenings over the arytenoids were also seen to diminish. The least effect was obtained in affections of the ventricular bands and epiglottis.

Phenol sulpho-ricin should never be applied to bleeding surfaces, *e.g.*, after curettement, as it simply irritates without doing any good. Again, in advanced phthisis little good is to be expected from phenol sulpho-ricin, but it often produces a subjective feeling of improvement. Cure was not produced in any case.

The author obtained satisfying results also in cases of phthisis of the nose, of pharyngitis and laryngitis sicca, and of pachydermia laryngis.

*Arthur J. Hutchison.*

**Mallard, J., and Bernard, C.**—*A Case of Typical Laryngeal Paralysis.* "Bull. Méd.," Mar. 31, 1897.

A YOUNG woman, aged twenty-one, was admitted into the hospital with typhoid infection. In the course of the disease, after a little hoarseness, she suddenly became violently dyspnoëic, which was caused by a paralysis of the posterior crico-arytenoid. At the same time there was paresis of the soft palate. The paralysis gradually disappeared, with diminution of fever and infectious symptoms. The authors believe it was from peripheral neuritis.

*A. Cartaz.*

**Theodor, F.**—*The Treatment of Whooping Cough.* "Archiv für Kinderheilk.," Band XXIII., Heft 4, 5.

THE author has tried most of the treatments recommended, and amongst others "vaccination," as recommended by Pestalozza. He has not seen the slightest benefit from this, even in previously unvaccinated children. He applied the treatment in ten cases, four of whom were previously unvaccinated, then gave it up.

His own treatment consists in very carefully treating any catarrhal condition present, keeping the children in the house till all catarrh is gone, and even then allowing them out only in fine weather. In the house they must have two rooms; while one is occupied the other is ventilated, and every now and again thoroughly cleansed out with a five per cent. to ten per cent. carbolic solution. Temperature of both rooms, food, etc., must all be carefully regulated. As an aid to this treatment he gives antipyrin to children under one year, momoform to those over one year, and carbolic masks (ten per cent. to twenty per cent. solution) to those over two to three years.

*Arthur J. Hutchison.*

**Von Bokay.**—*Intubation an Aid to Tracheotomy.* "Archiv für Kinderheilk.," Band XXIII., Heft 4, 5.

IF tracheotomy can be done slowly, the sudden difficulties and unpleasant surprises of which we hear so much seldom are met with. In many cases it is impossible to take time, but the operation must be done "at one go" if it is to be of any use. Since 1891 Bokay has adopted the plan of first intubating, then performing his tracheotomy at leisure. While not claiming priority in devising this method, he seems to think he is the first who has used it extensively. He very warmly recommends its adoption by others.

*Arthur J. Hutchison.*

## ŒSOPHAGUS.

**Barling.**—*Gastrostomy for Malignant Disease of the Œsophagus.* "Birmingham Med. Review," June, 1897.

ALBERT's operation is the one recommended, and if it be performed early, before the patient has become exhausted by starvation, the mortality ought not to be above ten per cent.

There is great increase of comfort in living. After this operation it is easy to

manage the feeding, a tube being kept in the fistula, closed with a clamp, and no excoriation of the skin takes place.

Records of three cases are given.

1. Male, aged forty-eight, blind, but can manage the feeding through tube quite easily. Only on coughing has the gastric opening allowed of leaking.

2. Male, aged forty-two. He had lost thirty-two pounds weight before the operation, and gained twenty-five pounds after it. This he has begun to lose again and to look ill.

3. Male, aged fifty-eight. He had lost two stone in weight and was very feeble, and had lung complications. The wound healed by first intention, and he was relieved by the operation, but died a month later, and the *post-mortem* examination showed extensive disease in the gullet, and secondary infection of the trachea, bronchi, lungs, and liver.

Barclay J. Baron.

**Kelling, G.**—*Endoscopy for Œsophagus and Stomach. Œsophagoscope.* "Münch. Med. Woch.," Aug. 24th, 1897.

THE author's instrument consists of a series of short cylinders, so hinged together that the whole instrument can be freely bent back and forwards in one plane, but is absolutely stiff in the plane perpendicular to this. Let the instrument be bent in one direction; along the convex surface let a series of eyes be fixed—one to each cylinder; through these let a wire be passed and fixed at the distal end. By dragging on this wire the instrument can be straightened and held straight. In the Œsophagoscope the wire is pulled by means of a double lever, which fixes automatically. When in use an india-rubber tube is drawn over the cylinders, and the end rounded off by a piece of sponge, etc.

The patient sits on the edge of a table, and the operator, standing on a stool or low chair, introduces the instrument in the flexible condition; thereupon the patient lies back so that his head hangs over the other side of the table, where it is supported by an assistant. Now by pressure on the double lever (acting like the handles of scissors) the operator nearly straightens the instrument, twists it to right or left through 90°, and at the same moment completely straightens it. The object of twisting the Œsophagoscope round through 90° is to take the strain of holding the Œsophagus straight off the single wire, and to throw it on to the double row of joints. During the introduction of the instrument—which is as simple as introducing an Œsophageal bougie—the patient must not suffer any pain.

Contraindications are practically the same as in the use of bougies. But this further precaution must be taken, viz., the Œsophagoscope must not be straightened, except where it has been possible to introduce an olive about three millimètres thicker than the instrument; otherwise there is danger of producing ruptures, etc. For illumination the author uses a Leiter's panelectroscope or a Kasper's hand lamp; only on rare occasions is it necessary to obtain illumination on the principles of Oberländer's methroscope.

Arthur J. Hutchison.

## THYROID, &c.

**Oppenheimer.**—*On Inflammatory Processes and Deep Suppurations in the Neck.*

"Archiv für Kinderheilk.," Band XXIII., Heft 1 to 3. Continued from Band XXII.

THE author directs attention to the danger of mistaking post-pharyngeal abscess for diphtheria unless careful digital examination is carried out.

The prognosis of post-pharyngeal lymphadenitis or abscess is always doubtful, owing to the numerous complications that may arise—notably, invasion of the mediastinum. The treatment should be by incision, either through the mouth or the neck. Spontaneous opening or resolution should never be waited for. Cases of undoubted abscess can be satisfactorily treated through the mouth by incision with a hidden-bladed knife, or a knife cutting only at the point. Care must be taken that the wound is not allowed to close too quickly, and that the pus is freely evacuated. Other cases remain which must be opened from without. These are mostly complicated cases—*e.g.*, cases with external abscess or tubercular cases—or, again, hard, swollen, but not suppurating, glands.

Periœsophageal abscesses arise from injuries or diphtheria (an interesting case by Baginsky) of the œsophagus.

Perilaryngeal or tracheal inflammations or suppurations arise chiefly in connection with diphtheria and scarlatina, and the treatment of the same by tracheotomy or intubation.

"1. Suppurations in the neck can arise from intubation, just as from tracheotomy. They are due to pressure and necrosis. The principal symptoms of peritracheal suppurations are (1) continued stenosis, (2) impossibility of removing the tube, (3) decrease of the period between extubation and reintubation, (4) the course of the fever, and (5) the local condition—tenderness.

"2. These conditions, as a rule, are indications for tracheotomy, which should not be put off too long, as frequently the diagnosis is made only with the incision.

"3. The length of time the tube is worn gives in itself no indication for tracheotomy, because in some cases the tube can be removed after eight to fourteen days. Extubation must be attempted every twenty-four hours. The time it can be kept out gradually increases in successful cases.

"4. Pneumonia is not a contraindication to intubation, but so soon as expectation becomes difficult, the pulse small, and cyanosis and dyspnoea continue, tracheotomy must be resorted to.

"If one intubates a larynx with intact mucous membrane (laryngitis, acute spasmus laryngis) the tube must not be left long in position."

The author considers that there is more danger in intubating for scarlatina, or even laryngitis or laryngospasmus, than for diphtheria. In the latter the membrane seems to form a protecting coat on which the end of the tube can rest more or less harmlessly.

The rest of the paper treats shortly of the surgery of the mediastinum.

Arthur J. Hutchison.

## E A R.

Claoué.—*Aural Affections and Fitness for Military Service*. "Annales des Mal. de l'Oreille et Nez," July, 1897.

A *résumé* is given of the regulations which exist on this point in the army medical departments on the Continent, together with the suggestions of Delstanche and Broemer and those of the author. The paper, interesting only in its details, should be read in full by those whom it concerns. Various stratagems for detecting malingering are quoted. It would appear that the most useful and least variable test-sound is to be found in the loudest whisper which can be produced with the air remaining in the lungs after a moderate expiratory effort (residual air).

Ernest Waggett.

**Du Fougeray, Hamon.**—*A Case of Primary Epithelioma of the Tympanum, following Suppurative Middle-Ear Disease of Twelve Years' Duration.* "Annales des Mal. de l'Oreille," Aug., 1897.

THE patient was a woman of forty-three, with otorrhœa of twelve years' standing, who, during the latter half of 1895, developed a partial facial paralysis on the affected (left) side. In September, 1896, shooting pains were experienced, the suppuration increased, and hæmorrhages occurred. On examination, the inner third of the meatus was found to be intensely red; and on the posterior wall a small, readily bleeding granulation was seen. A similar granulation projected through a perforation of the membrane, which was red and swollen. The mastoid appeared intact. Operation was refused, and daily syringing procured some amelioration, the hæmorrhages ceasing. Later, the facial palsy increased and the mastoid became tender. Again refusing operation, the patient ceased to attend; and in March, 1897, the mastoid region had become much swollen, and, through a sinus in the violet-coloured skin over the region of the antrum, a fleshy granulation projected. The patient had suffered intense pain for some time.

Operation was performed, and the integuments towards the temporal and occipital regions were found to be undermined by soft, friable infiltration. The external wall of the antrum and the posterior wall of the meatus were wanting; and, in clearing the growth from the large cavity so created, the cranium was found to be opened and invaded. By the end of April speech became affected, and death ensued at the beginning of June. Autopsy was refused.

Microscopic examination of the tissue showed lobulated, stratified epithelioma, with numerous cell nests. The case appears to be unusual, firstly, on account of the early appearance of facial palsy, which is said, as a rule, to occur with or after the other symptoms; secondly, on account of the direction of spreading. In this case the course taken was mainly upwards, the growth ultimately involving the fissure of Rolando. As a rule, invasion appears to be directed towards the temporo-maxillary articulation, the parotid, the mastoid antrum, the trigeminal, the structures contained in the foramen lacerum posticum, and the petrous portion. No hæmorrhage took place when the great vessels were invaded. Ernest Waggett.

**Lucae, A.**—*Conservative and Operative Treatment of Chronic Purulent Median Otitis.* "Therap. Monat.," Aug., 1897.

LUCAE protests against the present tendency to over-much operation on the part of otologists. Many cases now operated on ought to be treated by prolonged local cleansing and medical applications.

In deciding whether operation is required or not, one of the most important indications is giddiness. This is of no importance if it is merely a transitory giddiness produced during syringing the ear, and ceasing immediately. But giddiness that is constant, or that when produced by syringing lasts a long time, and is accompanied by sickness, faintness, or vomiting, indicates caries spreading inwards and probably affecting some part of the wall of the labyrinth.

The duration of the otorrhœa and its probable cause—*e.g.*, scarlatina, etc.—are important points to consider. Attacks of acute pain occurring in the course of an otherwise painless otorrhœa, at once raise the suspicion of more deeply seated disease. In a general sense the very profuse is more serious than a slight discharge, and the more mucus in proportion to pus that is found in the discharge the less danger is present. Little scales of epidermis floating on the surface of the water that has syringed the ear are of no importance at all; but little lumps arranged in layers like onions, and that sink in the water, come from a cholesteatomatous mass, "one of the most deadly complications of middle-ear suppuration." These cases

frequently, but not always, require operative treatment. Lastly, discharge with a heavy smell, which smell will not disappear under treatment, is always suggestive of cholesteatoma.

These are some of the chief indications for operative treatment of purulent median otitis. The rest of the paper deals with the conservative treatment. Syringes with an india-rubber point are recommended, and tetra-borate of soda and formalin are both highly spoken of as disinfectants. *Arthur J. Hutchison.*

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## REVIEWS.

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**Castex** (Paris).—*On Affections of the Voice.*

IN this work the author completes the research which he has already published in his work, "*Hygiène de la Voix, Parlée et Chantée*" (Paris, 1894). Generally speaking it is the diagnosis of a vocal affection which gives difficulty, the treatment being easier once the source of mischief has been discovered. The author studies the changes in the speaking and the singing voice in two different parts.

*Speaking Voice.*—Affections in this occur more frequently than in the singing voice, because the sum of the movements is greater, and also because the middle voice is alone employed. The affections of speech depend upon the quantity and quality. Simple weakness of the voice is often complicated with cramp, hoarseness, double voice, or it may be two, three, or more sounds. The therapeutics would include electrical treatment, massage, and other mechanical excitation in the region of the larynx, the important thing being the determination of the particular indications.

*Singing Voice.*—The affections here are more numerous and complicated. The author classes them according to their major symptoms, and deals with them in their order. Alterations in the timbre will be found in about forty per cent. of these affections. When the singing voice is tried two or three of the upper notes may be lost—the tone lowered; singing softly is almost impossible, while the sustaining of an increase or decrease during the singing of a note may be impossible.

With the laryngoscope there may not be much made out by way of a lesion. When we look to the causes of these affections, however, we may trace slight laryngitis (which may have been somewhat prolonged), over training or bad training of the voice, over fatigue, errors in classifying the voice, and in addition there may be constitutional conditions. For treatment, again, there must be absolute rest, massage, mechanical excitation, cold sprays intralaryngeally, and applied carefully by means of the laryngeal mirror, removal of granulations, adenoids, and such hypertrophies, electrical treatment, massage, attention to the training of the voice, and constitutional treatment. Dr. Castex in his work further treats of the affections high, middle and low voice, and also resonance, giving examples of these.

**Paget.**—*Masters of Medicine: John Hunter, Man of Science and Surgeon.* By STEPHEN PAGET. (London: T. Fisher Unwin, Paternoster Row. 1897.) Pages 272. One Illustration. Price 3s. 6d.

THE introduction to this, the first volume of the series, is by Sir James Paget, Bart., and the earlier chapters are confined to a short family history of Hunter, and a carefully traced account of his connection, work with, and the death of his brother William. Also his early life is well brought forward, and of considerable interest—notably those points which, like his love for nature, became so strongly marked later. His connection with Jenner is most interestingly told by means of the letters which passed between them. The failings of this great man are revealed, but with a kindly, reverent, and non-carping spirit, as is fit and proper. The whole book is one of great general interest, and if there are to be found in this edition parts which more especially appeal to us, professors of the craft of which Hunter was an apostle, they are in his London life and his wondrous museum. The influence of mind over matter is well exemplified in the man whose indomitable will and restless energy conquered his bodily failings when a veritable martyr to angina pectoris. The judicious handling the subject has received causes one to lay down the book with regret, and a sincere desire to reperuse it.

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